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MODERN DEVELOPMENTS IN EDUCATIONAL PRACTICE

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BY

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CHAPTER I

WHAT UNDERLIES THE NEW TEACHING

IN his book on *America's Coming of Age* Mr. Van Wyck Brooks tells us that on his side of the Atlantic "the recognised way of pinning down something that is felt to be in the air is to adopt some cast-off phrase and tack the word 'New' before it." But America has no monopoly of the device. On this side we have always had the New Art: lately we added the New Theology, the New Nationalism, the New Psychology—and now we have the New Education, with its variant the New Teaching, not to speak of the *New Children*.[1]

The reader's first reaction to the much-used adjective is one of opposition. He declines to admit that these things are really new. Critics cannot resist the temptation to quote a tiresomely familiar saying of a French cynic that the more such things change the more they are the same. In teaching, for example, no sooner does one suggest a method as something specially fresh than a resurrectionist expert is at hand to dig up from the history of education some hoary example of the same thing. It is certainly galling for the progressive teacher to

[1] Witness Mrs. Radice's interesting book with that title.

find in the books and speeches of inspired amateurs certain familiar methods described as startling and valuable novelties. Mr. F. R. Cholmeley, for instance, is indignant that in the reviews of Messrs. Beresford and Richmond's book entitled *W. E. Ford* the critics appear to take it for granted that nothing has been improved in education during the past thirty years. He has no objection to people talking of " Ford's Method " if they want to, but he would like them to remember that this method is, in fact, " part of the regular stock-in-trade of every place where teachers are taught, and of a large and increasing proportion of the places where they teach." It is hardly surprising, therefore, to find him telling us that to see the Ford methods treated as if they were new discoveries " is a little depressing."

Let it be admitted that we are at all times liable to fall into the fallacy that has aroused Mr. Cholmeley's just indignation. It seems inherent in human beings to regard their own period as one of notable change. We are continually telling each other that this is a critical time, that we are at the parting of the ways, that vital issues lie in our hands at the present moment. Heraclitus is justified of his theory. Without question we live in an age of flux. Men always have. It is natural, since it is inevitable, that we should be making a choice all the time, and in sober earnest we stand at every moment of our lives at what may be called the parting of the ways. No doubt there are partings that are of more importance than others, and it is man's nature to regard the present moment's decision as more than usually important. When

all has been said, however, it will be found to be a safe proposition that it is extremely difficult at a given moment in the development of any movement to determine whether we are or are not at a crucial point.

All this is set forth in order that the reader may realise that it is with full knowledge of human frailty, and not without an appreciation of the humour of the situation, that it is here maintained that we have reached a critical stage in the development of educational theory and practice. After what has just been written it would probably be inadvisable to say that we are at the parting of the ways, but it may perhaps be permitted to say that we have reached a meeting of the ways, a point where many influences join. The *Converging Paths* about which Professor Campagnac writes have led people to a position of open-minded enquiry accompanied by a willingness to take whatever practical steps may seem to be necessary to improve the educational situation.

When all allowance has been made for the relativity of newness, it must be admitted that each generation has its characteristic way of regarding all problems—education among the rest. The very fact that people are talking about the New Teaching implies that there is something that marks off our present-day teaching in some way or other from that of former times. At the very least, we have a new way of being novel in our methods. Just as each age has to have a new translation of a great classic if that classic is to be properly understood, so each age that is interested in education

at all has to be interested after its own fashion. That there is a new spirit in our educational affairs to-day is evident even to the most superficial observers. We in England are not temperamentally inclined to be drawn aside after the strange gods of mere novelty in education. If we are interested in education at all, it is enough of a portent without our asking for something more wonderful. Yet we have only to open our eyes to find examples of all manner of movements and plans and projects demanding and receiving the attention of school people. No teacher of spirit can fail to be stimulated by merely turning over the pages of Mr. Ernest Young's *The New Era in Education*, and even the layman will find there cause for serious reflection. It is true that the cautious and reactionary teacher or administrator who can be induced to dip into the book, will look up with a woeful shake of the head, indicating the uneasy feeling within that education is getting into the hands of cranks, and that the whole of the stable and well-tried methods are in danger. Let all such anxious minds be at rest. There is not the slightest danger of our schools going to excess through new ideas. The danger is all in the other direction. Consider for a moment the world of contempt that the average professional teacher can throw into the phrase "freak schools!" Note the turn up of the nose at the mere mention of the Dalton Plan, the Project Method, the Play Way.

Yet there is comfort in the frequency with which the professional nose has to be turned up in these latter days. The persistent growls from many a

conventional common-room are extremely hopeful signs of the times. It is well that Mr. Young should be able to provide such abundant material for the censure of the severely orthodox. It is much that such an array of actual experiments can now be presented for criticism and verification, but it is more to realise that these are merely the efflorescence of a growing spirit of enquiry that is only now coming to its own. For every new method in actual practice there are scores in theory, all clamouring in the educational press for an opportunity to express themselves in action, and get themselves put to the test of practice. It is probable that there never has been a time at which so much public interest in education has been shown in this country.

There is, to be sure, no mystery about the cause of the effervescence. There are people waiting at every street corner—their very eagerness being a demonstration of the enthusiasm they seek to explain—to exploit the commonplace that periods of exceptional educational interest always follow great wars. The statement need not be questioned, nor need the fact be explained at length. Intelligent people need no help in understanding the relation of cause and effect here. The significant point is that the twentieth-century interest in education cannot be attributed solely to war influences. No doubt on this occasion education was itself quite commonly introduced into arguments, as one of the main causes of the war. We all told each other that the German educational system was deliberately organised to promote the war spirit and the

preparation for fighting. No doubt we were right, but if so we have merely carried the cause a few steps farther back. In all probability, the causes that led to the outbreak of 1914 had also something to do with the great development of interest in education. In any case, that development was well marked long before the fatal August of that year.

No doubt throughout the ages there have always been a faithful few who devoted themselves to purely educational problems. The labours of the historians of education have unearthed quite a respectable number of these worthy people, and have placed them in the niches to which they are entitled. But there can be no doubt but that education entered upon a new phase so soon as popular instruction was established on a national basis that included the whole population. During the debates in Parliament that led to the passing of the Education Act in 1870, a considerable interest in the subject was aroused in the nation at large, but as soon as the Act came into force the demand for the training of an army of teachers compelled immediate attention to the nature and methods of education. Up to this period the demands of education were confined to the supply of capable men and women who were willing to turn their energies towards the teaching of boys and girls. For the higher grades of work men drifted into the profession from the universities, and for the lower grades a sufficient supply of more or less educated people was available. From the passing of the Act it became imperative that the

whole subject of education should be looked at in a broader way. Thus it came about that the development of education as a subject of study received a remarkable acceleration from that time onward.

Dr. R. Austin Freeman, in his *Social Decay and Regeneration*, tells us that in all departments of life there has been an enormous increase in the rate of change since the introduction of the power machine. In all essential respects the *Victory* belonged to the same class as the ships of Tarshish, and the change from the *Victory* to the *Aquitania* is almost infinitely greater than any change in shipbuilding that took place during the whole of the preceding centuries. No doubt, in an indirect way, the power machine had also a good deal to do with the introduction of national education, though naturally it took some time for the industrial revolution to produce this, perhaps the most striking of all its indirect effects. But the change, when it came, revolutionised educational methods, and gave them new power, new form, new potentiality. The difference was almost as great as that between the two types of ships. If Plato and Aristotle could return from the shades for what the Board of Education might call " a visit without notice " to one of our great Public Schools, they would probably not feel greatly surprised at what they would find there ; but if they chanced by mistake to drop into one of our huge elementary schools, they would certainly find themselves very much at sea.

Naturally enough, the first effect of the need to train an army of schoolmasters and schoolmistresses

was to direct close attention to the human element in the schools. It will be at once objected that the necessary herding together of great masses of boys and girls in class-rooms tended to remove all interest in them as human beings. This is true so far as it goes, but we must not lose sight of the fact that the very size of the classes made it imperative that the human nature of the children should be studied, if only in the lump. The power of managing a large class was regarded as essential in elementary teaching. The teacher might not "know his boys" in the secondary schoolmaster's sense of that phrase, but he had to know how they behave in the mass. He had to know the boy generically. By a sort of shorthand thinking he typified his pupils so as to get at a rough-and-ready set of principles of class-management. Accordingly, when training colleges were established for the preparation of young teachers for the work of elementary schools, it was only natural that they should adopt plans that would, in the shortest and easiest way, qualify their students to meet the new conditions of massed teaching. No doubt the students had to have a certain training in the academic subjects, but these were considered to be of secondary importance. It was felt that training-college students would soon learn as much as was necessary for the purposes of the elementary school curriculum. The popular opinion is well represented by Dickens' grim account of the training of Mr. M'Choakumchild in *Hard Times*. But whatever happened on the side of culture, there was never the least doubt in the minds of the authorities about the need of develop-

ing the power of control. The real problem of the college was felt to be the turning out of students ready to take up a position in a huge human drill-yard and hold their own there. The pretraining-college view had been that if a man knew his subject that was enough. Sometimes, indeed, broad-minded masters added a demand for a sense of humour; but the knowledge of the subject to be taught was the *sine qua non*. The teacher was assumed, as a matter of course, to be strong enough to make his boys do what they were told, but anything in the way of skilful class-manipulation, or the scientific preparation of subject-matter for presentation to a large class, was not thought of.

The result of the new methods of training was that by and by it began to be noticed that there was a marked difference between two groups of teachers. Those in Public and secondary schools were usually men of considerable attainments in the subjects they taught, but, except in the extremely limited ranks of the heaven-born teachers, quite innocent of any knowledge of method. Indeed they rather prided themselves on their ignorance of method, and spoke contemptuously of the petti-fogging "methods" of the teachers of the elementary schools. These latter, in their turn, were not credited with a very advanced knowledge of any subject, but were acknowledged to be, generally speaking, masters in the art of presenting what knowledge they did possess. So strong was the public opinion on this subject, that some of the middle classes spoke rather bitterly of the unfairness of their having to pay rates to support the Board

Schools, while social reasons made it necessary for them to send their children to schools where the actual teaching was inferior to what was found in the Board Schools. The upshot of the whole matter was that the study of education as such began to attract public attention. University professorships in the subject were founded, and even secondary and Public School men and women began to look into the matter.

Leaving out of account the apparently inevitable jealousies among the different grades of teachers, the effect of this professional interest has been the gradual development of new ideas on the subject. The changes have not come entirely from the schools. Some of them have been superposed from without. But all of them have exercised an influence beyond the range of the schools that have actually adopted them. Many teachers who are too timid to adopt outright any of the newer plans are greatly influenced by them, and that influence is manifest in the way in which they carry on their school-work. Very probably this is just the way in which innovations can be best introduced into school practice. Whatever is done, everything depends upon the attitude of the actual teacher. It is accordingly of the first importance that educational reformers should be able to carry the teachers with them. The thing cannot be done by orders issued from above or imposed by the prestige of authoritative writers on education, however distinguished. Progress can be best secured by persuading teachers of the superiority of the newer plans. This will naturally be accomplished in different degrees with different teachers. We

must therefore be prepared to find no one plan applied in all degrees of completeness in the schools of the country. We are not to forget that in our work, as elsewhere, there is the periodic rise and fall of tendencies. Those who have studied the history of medicine tell us that certain modes of treatment rise, spread, and disappear for a time, only to repeat at later periods the same process with slight modifications. A skilful student of the history of education could supply many illustrations of this periodicity in the case of our craft.

It is unpleasant to think of educational movement being a mere recurrent series of waves, unless we can be sure that each wave rises a little higher than its predecessor. In any case, we are unwilling to believe that all the present innovations in education are merely sporadic outbreaks of separate and independent influences, based on varying and uncorrelated views on the big question of education as a whole. As one studies the different plans and methods, however, one is led to see that they have a great deal more in common than one would at first sight suppose. Indeed, it is extremely difficult in dealing with any one of them to avoid dropping into a consideration of some of the others. In writing such a book as this, there is little temptation to fall into the water-tight-compartment line of error. Inter-connections crop up at every turn. The different chapters can, with difficulty, be kept apart. There appears to be an underlying force making for unity. If the same thought has sometimes to be presented under different aspects, the explanation is to be found in the organic oneness

of the subject. Naturally, the enquirer wants to discover whether there is an underlying general principle exemplified in all the newer movements, and I believe that something not unlike such a guiding principle can be found.

Probably this principle is to be sought in the culmination of a tendency that has been developing for many generations, rather than in the sudden appearance of a new influence. My attention to what I believe to be this dominating tendency was roused in a curious way by reflection, at a very immature age, on the syntax rule in my *Edinburgh Academy Latin Rudiments* that runs: "Verbs of teaching govern two accusatives, one of the person, another of the thing: as *Magister Latinam Johannem docuit*—the master taught John Latin." The essential difference between the old and the new teaching lies in the incidence of effort on these two accusatives. The old teachers laid most of the stress on Latin, the new lay it on John. In both cases it is probable that the teacher still drives his team tandem, though of old Latin came first, while John was kept in the backward region where, incidentally, he was more accessible to the whip. In these days John is brought into the position of prominence, and certainly gets his full share of the teacher's attention.

The figure, after the manner of figures, leads us into difficulties. It may be legitimately maintained that the teacher cannot, by any possibility, do real teaching at all if he neglects either John or Latin. To this a cordial assent may be given, and yet the point be maintained that it is possible to vitiate

the teacher's work by an unwholesome distribution of his attention. Perhaps the figure may be carried farther by the suggestion that the New Teaching does not put John in the front, but drives him and Latin side by side. The tandem method has been given up altogether, and one of the most characteristic features of the intelligent New Teaching is that the true relation between pupil and subject-matter has been clearly recognised.

Those who are familiar with the history of education will not be slow to point out that this change in the incidence of the teacher's attention is no new thing. They will almost certainly select Rousseau as the chief exponent of the attitude, and probably most people will agree. Admittedly in his writings we are dealing with a real live child, however artificial and grown up he becomes in the hands of his artificially inclined creator. Pompous and pedantic as is the dandified little Emile, he is the best his creator could produce as an example of the natural child. He was undoubtedly meant to be natural. Is not Rousseau's principle *Education according to Nature*? Further, he was regarded by his creator as more important than the subjects that were taught him in a more or less artificial way. Rousseau can therefore be justly claimed as a precursor of the new educators who fix their attention upon the pupil as the centre of their interest. But it has taken all the time from the publication of the *Emile* in 1762 till now to get this attitude firmly established. It was not till the other day that a term was felt to be needed to indicate the change of the incidence of attention from the subject to the pupil. We

need that term, but many of us are unwilling to pay its price by incurring the odium of introducing a neologism. Fortunately, however, the work has already been done by one who has sinned so deeply in the way of neologisms that one more or less cannot in any way affect him. It is one of Dr. G. Stanley Hall's flagrant defiances of pedagogic decorum to use the hybrid adjective *paidocentric*. It is regrettable; but since the word is there, and the mischief has been done, anyhow, why not use the term? Accordingly, with a subdued "Thanks" to its author, let us boldly accept *paidocentricism* as the name of what appears to have a fair claim to be regarded as the underlying principle of the New Teaching.

A very little reflection will show that all the newer tendencies are paidocentric. Montessorianism is a consistent sweeping away of everything—except perhaps apparatus—that can obscure our view of the living child. Everything centres in the child, and the teacher, so far from being a competitor for attention, is to be kept scrupulously out of the way, except in so far as she is called upon by the little person who occupies the focus of the limelight. The Dalton Plan again asks the teacher to step aside, and let the children act on their own account. The Intelligence Tests put the child in the fore-front: even when the investigations are carried on by groups, the ultimate result is estimated by the light it throws on the nature of the individual child. The subject-matter of the tests is of importance only in so far as it fits into the needs of the individual child, who forms the ultimate unit of the teacher's

work. Supervised study, again, centralises the child. The Gary Scheme deliberately builds the school round the requirements of the child : these dominate everything. The Play Way with all that it implies is conspicuously worked out at the address of the child. The Project Method is a complete surrender to the child's point of view. We shall find, in fact, that all we have to say about the pupil being an end in himself as well as a means to the ends of others, and all about the tendencies to split up the class-teaching system, supply exemplifications of the principle of paidocentricism.

It has become fashionable, indeed, to speak of this as the children's century, though it has in fairness to be admitted that the nineteenth century was before us in this claim. This implies a gradual working-up to a climax of interest in and respect for the age of childhood. In itself this is merely one, though perhaps the most important, manifestation of the general tendency of the twentieth century before the war to protect the relatively weak. Even after the war (and in spite of the hardness it left behind) it may not be quite untrue to describe the present as the time of the physically weak, the time when, as never before, the world is considerate of the unfit, the unfortunate, the down-dog, the person who has not the bodily energy to enforce claims on society. However this may be, it is certainly in a very full sense the time of the child. Alike by legislation, by personal investigation—as in all forms of Child Study and the genetic forms of psychology—and by public opinion, the child is proved to have entered into his kingdom. A fundamental tendency of

this kind not only exercises a potent influence in general society, but bears directly upon the work of our schools and school people. Thus we read :

> " The tests are used to locate pupil weaknesses in order that such weaknesses may be corrected. The individual child thus becomes the centre and object of the work. It is not school systems as such, but children that are important. That we have so quickly, in the use of standard tests, come to recognise that the child is the real centre and the true object of consideration, is an indication that to-day, as never before, the spirit of progress and service is dominating and determining all educational effort." [1]

That the tendency is to correlate pupil and subject-matter, not to emphasise one at the expense of the other, is shown in the French movement towards what they call integral instruction. They note that at the end of a long course of instruction the pupil retains only a small fraction of the knowledge imparted to him, and some at least of their writers appear to regard it as a practical proposition to find what usually makes up this residuum, and confine their instruction to that, thus saving the time and labour involved in communicating all the rest of the matter that normally disappears in any case. The wiser integralists see what a nonsensical attitude this is, and set about establishing a system in which all the elements will be so correlated as to form an organic whole. At present, instruction is largely a thing of shreds and patches. Our pupils learn a large number of subjects each more or less independently of the others, and our pupils too often see

[1] Preface to *How to Measure*, by G. M. Wilson and K. J. Hoke (1920).

little connection among them. The French critics are disappointed to find that the pupils learn this, that, and the other subject at different times of the day, without ever troubling to find out whether they have any connection with each other. A reference to the attitude of the teachers brings little comfort, for they too do their hour's duty with the class without reference to the pupil's work as a whole. It is, as a distinguished French educator [1] remarks, " a case of a fragment of an educator addressing itself to a fragment of a pupil," and, he might have added, " about a fragment of a subject." The French are so impressed by the ultimate unity of the sciences that they are tempted to seek a solution in a unification of the subject-matter of the curriculum ; but the wiser among them realise that the educational solution must be found in the educational process itself. What is wanted is not merely that the curriculum should be so organised as to present an organic unity of subject-matter, but that the staff of the school should act *as an educational unity* in its influence on the individual pupil.

A good deal of the groping of the New Education is towards some means of reaching this unification of the teaching forces. John Dewey's *School and Society* presents with great clearness one aspect of the movement, and the persistent tendency towards *socialising* [2] the teaching of the school subjects shows the working of the seed he sowed. The dissatisfaction with the fragmentary nature of the current

[1] Ernest Lavisse in his chapter on " Une Education Manquée " in a work entitled *L'éducation de la Démocratie.*

[2] Cf. R. M. Weeks' *Socialising the Three R's.*

educational system is widespread, and is expressed very emphatically even when it is accompanied by positive suggestions for improvement. Take the following from an appeal against the penny-wise plan of having our boys and girls educated by poorly or badly trained teachers. The appeal is from the school to the parents:

"Because the average school works against the health of our sons and daughters, we must strive all the harder to upbuild that health. Because the school tends to stunt the body and mind and even the soul of the child, we must work all the more to expand those. Because the school still depends on the old, bad stimulus of competition, we must emphasise all the more the beauty of co-operation, of each working for all and all for each. Because the school puts most of its emphasis upon using the head, we must do everything we can to provide occupation for the body and the hands . . ." and so on.[1]

This pessimism is reflected within the profession itself, and gives rise to rather revolutionary demands. Mr. Caldwell Cook has no hesitation in expressing very strong views on the subject:

"The educational system has, in fact, not been evolving at all, it has been congealing. And now it has become clogged, stuck fast. The educational system has ceased to be educational. Consequently, we cannot look for reform through minor adjustments. The suggested improvements of which we have heard do not go to the heart of the matter. We must have an upheaval."[2]

Something rather like this desired upheaval is in

[1] J. P. Munroe, in *The Human Factor in Education*, p. 30.

[2] *The Play Way*, p. 353.

sight at the present time, and might be regarded as imminent but for the restraining force of an institution that in Britain exercises the most powerful influence in favour of the policy of "no further action." Nobody acquainted with educational affairs on this side of the Atlantic needs to be told what this force is. External examinations form the dead hand that tradition places upon all attempts to get out of the rut of established educational custom. It is difficult for anyone not actually engaged in school-work to realise the handicap put upon every attempt at educational reform in Britain by the position of prestige granted to the work of the external examiner. The testing of the results of work done in school is an excellent thing in its way, but it ought to be kept in its proper place of subordination to the work being done. It is pitiful that it should be necessary to state in plain words the platitude that schools exist for the purpose of education. In actual practice what the teacher has to keep in the foreground is the external examination. In spite of the incessant wail against them for the best part of a century, external examinations still remain in their unwarranted and hurtful position as the dominant influence in education of all grades. Nothing of vital importance can be done in the way of reforming educational methods till this incubus has been removed. We shall find in the following pages that every suggestion for improvement is met by the practical objection —"But what about the examinations?"

Let it be admitted at once that there is need of some means of testing the results of the teacher's

work in some directions that lend themselves to this form of estimating results. The highest results of a teacher's work can never be tested by any formal examination. Only the after lives of his pupils can bear true testimony to the value of his work, and even these cannot be so accurately analysed as to give reliable data on which to form a judgment. But it is true that his work as a mere instructor can be tested in a more or less mechanical way, and in a commercial nation like ours it is perhaps natural that some such test should be demanded. The school inspectors of the Lowe period had the police function clearly in mind. They were there to see that the nation got value for its money, and a mechanical system of measuring results was rigidly applied. The gross failure of their crude methods threw the system into disrepute, and the modern examination system is based on much more rational principles. Even the Board of Education has set itself to reduce the total amount of examination work to be demanded from the pupils, and has, in fact, reached the stage that only two examinations are absolutely necessary for the ordinary pupil taking a complete school course ending at eighteen. Still, there has to be a certain amount of uniformity in these two examinations. The pupils have to face a test of a prescribed kind, the preparation for which necessarily limits the freedom of the teachers.

No well-conducted school will object to its instruction results being tested even by an outside body, so long as the test is applied with reference to the actual work done in the school—that is, so long as the test is subordinate to the instruction,

instead of dominating it. In Chapter IV certain attempts are described by which ingenious persons have sought to establish such standards as may be applied on more or less generally accepted principles, in a way that will leave the teachers entirely free to follow whatever methods they find produce the best practical—but not necessarily examinational—results.

Probably the line of development will be the gradual substitution of inspection for examination. The external authorities will satisfy themselves by means of inspection that the schools are working on sound principles, and are teaching the subjects that meet the needs of society, and then accept the pupils trained in such schools as qualified either to enter the universities, or to take up whatever walk in life they may desire to follow, without any further examination on school subjects. No doubt further examinations will be necessary to satisfy employers who demand special qualifications, but these will be professional or industrial examinations, and will leave the school course free for the teachers to develop in the best way they can, without the present bar to practically all serious and fundamental reform.

It does not by any means follow that when the lion of external examination is removed from the path there will be an immediate and overwhelming rush after new methods. Those reactionary teachers who find a certain satisfaction in the present examination system, because it provides a convenient breakwater against a threatened flood of innovations, need have no concern. Our profession is an eminently conservative one. Contentment with things as they

are is not perhaps a *sine qua non* in the make-up of a successful teacher, but it goes a long way towards securing a conventional success. Yet with the removal of the barrier of the examination system there can be no doubt that a very steady trend towards improved methods would at once become noticeable. It does no service to the cause of progress to maintain that greater advances are being made than is really the case. There is now a Conference on New Ideals in Education, that appears to be established as an annual one, which is regarded as a sort of clearing-house for the exchange of the various new ideas that are being worked out in different parts of the country. When we hear of Mr. O'Neill's school at Manchester, Mr. Arrowsmith's in Lincolnshire, Mr. MacMunn's Tiptree Hall Institution, not to speak of Mr. Homer Lane's famous Little Commonwealth, we feel that things are moving, and need the caution that Mr. MacMunn gives us. He is not pleased at the progress being made in experimental education, and utters a protest in the very opposite sense of Mr. Cholmeley's:

"Nothing is more distressing than to hear men who should know better endeavouring to represent present-day schools as places filled with teachers of a changed heart and a love of experiment. The author has several times been charged with having underrated the improvement of method in recent years. This is plainly a little innocent jesuitry—for everybody with the smallest capacity for analysis and power of observation and means of meeting both boys and masters, knows that experimental methods are so rare as to be far from falling within the reach of a majority of children." [1]

[1] *The Child's Path to Freedom*, p. 40.

All the same, we can again take up Mr. Ernest Young's *The New Era in Education*, turn over its hopeful pages, and find ourselves impressed with the new spirit it breathes, and with the number of places in which this spirit finds it possible to realise its ideals. To be sure, on investigation a large number of the experiments appear to be conducted in connection with private enterprise institutions, but elementary and secondary municipal schools find a place and prove that experiment is not ruled out even in state-controlled schools. Indeed, it is perhaps not too much to say that the present Board of Education and its officials are at least as much inclined for experiment as are the teachers.

The recent literature on the general subject of education falls naturally into the two groups of pessimism and optimism. Probably, on the whole, pessimism has it. I find that I have quite a library of books with such depressing titles as *The Tragedy of Education, The Curse of Education, Where Education Fails, Fool Culture, Essays in Revolt.* The optimists take a less exuberant tone, though Mr. William Platt wins general praise by his bold title *The Joy of Education.* The denunciations, however, are all more or less theoretical and destructive, the optimists are practical and constructive, though of course they have to demolish before they can set about building, for clear sites in education are rare. In any case, it will be found that the movements most characteristic of the present day have a distinctly practical turn, and are based on a philosophy that is full of hope.

CHAPTER II

THE CHILD, THE SCHOOL, AND THE WORLD

GIVEN the living child here and now present, the problem is to educate him. The very mention of this final verb exposes us to the imminent danger of such a flood of definition as may overwhelm us before we get well started. With a full knowledge of all that can be and has been said against it, we may not unwisely accept as a provisional statement of the aim of education Herbert Spencer's *preparation for complete living*. Among the practical people of the English-speaking world it will be found that this provides the line of least resistance. There is just that degree of vagueness about the statement that allows of making a beginning without leading to immediate quarrelling about terms. To be sure, hundreds of questions are trembling on the lips of those who read the Spencerian principle, but sensible people realise that a beginning must be made somewhere, and complete living is a phrase comprehensive enough to satisfy the most exacting. The naked elements of the case in actual life are the living child, the world for which he has to be prepared, and the school where the preparation is to take place. To this extent the school as a social institution has to be taken for granted. How far

its present form need be retained is a matter for discussion.

As things stand, the school and the world appear to be out of harmony. A very common attitude towards the work of schools is well illustrated in a remarkable volume by an American author setting out his autobiography under the form of a search for an education—a search, by the way, that does not seem to have been successful. The reader of *The Education of Henry Adams* is irritated by the persistent way in which the author mixes up the ideas of education and life. Systematic education of all kinds is belittled, but anything in real life that chances to have had an effect upon the writer's character is treated with respect and referred to as "accidental education." This deliberate confusion goads the reader to demand a working distinction between education properly so called and the educative influences that are brought into play by the mere process of living in the world. Elsewhere [1] I have used the term *cosmic* to mark off this undeliberate but very effective "licking into shape" that goes on in ordinary living. But a simpler and more appropriate term, "by-education" [2] is coming into use, and will be found convenient in distinguishing the systematic work of the school from the less formal but not less effective educational influences of social intercourse of all kinds. Hitherto by-education has not had the consideration it deserves at the hands of those who have dealt with the subject. School education has up till now been treated

[1] *Evolution of Educational Theory*, p. 31.

[2] Cf. David Snedden, *Vocational Education*, p. 8.

as a thing apart and out of all relation to the wider forces that underlie by-education. For a true understanding of the educational problem as a whole, there must be a careful consideration of their interaction.

The whole paraphernalia of public education, with its elaborate system of administration and its network of institutions and buildings, lead to such a concentration of attention on the school that the ordinary person may be forgiven if he comes to regard education as confined to what goes on in buildings recognised for this purpose. He is tempted to regard it as something that begins at nine or nine-thirty each day and ceases at four or four-thirty, with a varying interval for lunch. In many cases Saturdays and Sundays are free days, in which the pupils are not being educated, but merely live. This vague view the plain man may perhaps accept without sin ; but for the educator it is out of the question. He must realise that the educative process goes on relentlessly all the time that his educands are awake, and, if the psycho-analysts are to be believed, it does not cease even when they are asleep. It is only in thought that the school and the out-of-school world can be regarded as independent of each other. Professional teachers are entitled to draw quite a sharp distinction between what goes on in school and what goes on in the outside world. Such a distinction is necessary for teaching purposes ; but they will never fail to realise that the two spheres form part of the same world, and are so intimately connected with each other that any attempt to isolate them is futile.

No doubt a certain type of teacher—fortunately not at all a common one—claims a practical divorce between the school and the outer world. He adopts the attitude that as we go to an ironmonger's for hardware, to a fishmonger's for fish, to a bookseller's for books, so we go to a school for information. Schools are knowledge-shops, and teachers are information-mongers. Their business consists in communicating a certain amount of knowledge, and their duties are discharged so soon as the agreed amount has been imparted. There are, no doubt, types of schools where this attitude may be reasonably maintained. An explicit bargain is recognised, a certain amount of knowledge or skill to be imparted for a given price, and, in the popular phrase, "no questions asked." Such institutions overemphasise the teaching aspect to the disadvantage of the educational. It is true that educational responsibility may be rejected, but educational effects follow all the same. It is a case not merely of direct teaching, but also of by-education. Even the information-mongers, however, have to admit that in the last resort they cannot dissociate their school-work from what goes on in the outer world, since their stock of information owes its value to the use that may be made of it outside school.

While the plain common sense of practical people has made it possible to assume as a working hypothesis the Spencerian view of the aim of education, we cannot hope for anything like the same unanimity when we suggest that, taking the widest view of education, we should like to regard the promotion of the self-realisation of the educand as its ultimate

goal. The truth is that the aim of education is suffering very badly from over-discussion. The subject has been threshed out to such an extent that there appears to be almost nothing left. It does not seem an unreasonable or dangerous suggestion that the final aim of the educator is to enable the educands to make of themselves the best of which they are capable. To those who sternly insist upon the rights of others, and hold that no man liveth to himself alone and that it is selfish merely to cultivate oneself,[1] we can make all the concessions required, and still maintain that even in the interests of others it is essential that our educands should make the best of themselves. Society is not being neglected while the units of which it is made up are being improved. On the other hand, no one understands more clearly than the upholder of self-realisation that his ideal is unattainable except in so far as the individual reacts wholesomely on his fellows. Perhaps the argument most likely to win acceptance of the self-realisation ideal among practical people is that it is in no way antagonistic to the Spencerian ideal of complete living, for obviously complete living demands that the individual must be enabled to make the most of himself. The whole modern conception of individuality is that it can be fully realised only in and through a society.

Though life in school should not differ in essentials from life outside it, there should be a difference in the incidence of the forces concerned. In the last

[1] See, for example, Dr. Edward Lyttelton's *Letters on Education*.

resort education consists in the manipulation of the experience of the educand. The school is only a place where experience can be best manipulated to the advantage of the pupils. As Professor W. Franklin Jones puts it in his *Principles of Education*: "The school is fundamentally an experience-giving institution, and if it cannot give more vital experiences than the child can get anywhere else in the world, it has no valid claim upon his time." [1] Dr. E. C. Moore, of the University of Southern California, works out this idea in greater detail in his *What is Education?* To this question his answer is that it consists in the manipulation of the experience of the educands in such a way as to lead to their taking their proper place in the society in which they have to live.

This manipulation of the environment is sometimes opposed on moral grounds. The eminent French philosopher, Emile Boutroux, strongly protested against the deceptions of what he called pedagogy as contrasted with education:

"Education, pure and simple, makes straight for the end it has in view, employing the methods suggested by ordinary good sense, tact, and affection, or taught by observation and experience. Pedagogy, as interpreted by its most famous representatives, mocks at these natural processes and cunningly endeavours to substitute therefor methods that are learned and artificial. . . . The pedagogy of which I speak never proceeds along a straight path, but is ever on the look-out for side-tracks. . . . Now the use of these artifices is an illegitimate use." [2]

[1] *Op. cit.*, p. 8.
[2] *Education and Ethics*, Introduction, p. xxxii.

Monsieur Boutroux is here tilting against the ingenious devices of Locke and Rousseau to get the educand to follow a line of conduct desired by the educator. But manipulation of the environment does not necessarily imply deception in the moral sense of that term. Things may be so arranged that events must happen in just the order to suit the needs of the educator—an order, however, that would never have occurred but for his thoughtful prevision. The child who is thrown into a society without any preparation at once sets about co-ordinating his experience in such a way as to secure the best results, as he understands results. Within his own narrow limits he often succeeds so well as to rouse the envy of the parents of those who can afford what they are sometimes constrained to call the doubtful advantages of a school education. It is this feeling that underlies Professor S. S. Laurie's curious plea to provide for the children of the well-to-do some of "the advantages of the gutter." But these benefits are dearly bought in this market. They can be obtained in a much less costly way in a school, if only that school be so conducted as to bring it into a living relation to what goes on in the outside world. Any artifices the teacher can utilise to bring his pupils into closer touch with the realities of life should be welcomed, and Monsieur Boutroux' indignation should be diverted towards those schools that by keeping apart school-interests and world-interests deceive their pupils about the real nature of the world in which they have to live.

Quite consistent with all that has gone before is the view that education is necessarily a process

of adjustment between the individual and his environment. Professor O'Shea has devoted a complete volume to *Education as Adjustment*, and the whole subject has been worked out in a striking book published by Dr. J. E. Adamson towards the end of 1921 under the title of *The Individual and the Environment.* Here we have the educand treated in relation to three worlds that make up his complete environment: the natural world, the social world, and the moral world. Obviously all the natural and physical sciences belong to the first, all the humanist studies to the second, and all the ethical and religious to the third. It is at once evident that there is a certain amount of overlapping between the second and the third worlds, but Dr. Adamson regards it as essential to retain the threefold distinction in order to emphasise the different approach the educator makes to each. In the natural sciences it is a matter of exploration: when we approach the social world we are embarked on a voyage of discovery in which we are dealing with matters of which we ourselves form a part—we understand humanism because we are human; but when it comes to morals we actually add something to what we study. It will be seen that Dr. Adamson adopts here the attitude of Kant, and regards man as a creator. Without treating us to the full pomp and circumstance of the categorical imperative, he gets from it all the advantages it offers.

But from our present standpoint perhaps the most striking position taken up by Dr. Adamson is that bearing upon the influences exercised by the teacher.

" Within that mysterious synthetic activity through which the individual is at once appropriating and contributing to his environment, forming and being formed by it, and which we are considering under the conception of adjustment, the teacher has neither place nor part." [1] This comes as a shock to the teacher who has just been reproved by Monsieur Boutroux for illegitimately exercising an excessive power. Dr. Adamson proclaims that his own view is not commonly held; that, in fact, the opposite view is almost universal. This does not disturb him in the least, as he proceeds cheerfully to attack the doctrine that the educative process is bi-polar. He cannot deny that it is in a way bi-polar, but he regrets that it is so, and holds that this way of regarding the relation is unsound, and leads to evil consequences. He is driven to " assert the altogether subsidiary, ancillary, and transient personal bi-polarity of teacher and pupil, or educator and educand." He maintains that education supplies a case of tri-polarity. " One pole should be the conscious process, the centre of evolution; the second should be the fact, quality, truth, or act which is the focus of attention; and the third the reflective guiding activity of the master." [2] With this the practical teacher may find no serious fault, though he may have a difficulty in seeing how a fact can be a pole. He will even admit that the bi-polar relation between educator and educand is " highly dangerous," since it lends colour to the view that the teacher-personality should dominate

[1] *Op. cit.*, p. 27.
[2] *Op. cit.*, p. 342.

the pupil-personality, whereas the adjustment to environment should be carried out as much as possible by the pupil's own activity and initiative. We follow sympathetically Dr. Adamson's argument for the non-interference of the master, and we look benevolently on the picture he draws of master and pupil " plodding side by side on the same road," but we have within us the ineradicable conviction that of the two plodders it is the master who has dominated and always will dominate the situation.

The practical question that emerges with all the more urgency from this excursus into current theory is : What is the function of the school in the process of the educand's adjustment to the various worlds ? Obviously, it must provide experience in dealing with the content of the Adamsonian three worlds. The school curriculum must provide, in an intensive form, means of acquiring experience of all three. An analysis of the school curriculum such as is found in Mr. B. Branford's *Janus and Vesta* [1] shows that in its essentials it does correspond to the threefold classification, and justifies us in accepting Professor Franklin Jones' principle that " The course of study is a selection of those impersonal experiences of the race which we believe will be most valuable to the life of the child." [2] He invites us to catalogue all our own experiences for a single day under the heads of the various school subjects, such as Geography, History, Mathematics, Physics, Languages, and assures us that we shall find life a very complex business, but that it will be possible to discover

[1] Chapter X, p. 128, ff.

[2] *Principles of Education*, p. 10.

a niche in actual experience for most of our apparently abstract school subjects.

It does not follow that such a comparison of what we learn in school and what we experience in life should lead to a quantitative correspondence between the two. Here Herbert Spencer helps us greatly by the magnificent blunder he made in his apportionment of school-time to the artistic and general humane subjects. Since these occupy the leisure moments of our life, he holds that they should get only the spare time during the educational course. There is really no fixed ratio between the amount of time spent on a subject in school and its importance in post-school life as judged by utilitarian standards. We have to keep clearly in view the three worlds for which we are preparing, and we must give each its fair chance.

Teachers are too familiar with the business man's demands that he should be supplied from school with pupils who are ready to begin at once the mechanical work of his office. This practical person believes himself to be particularly modest in his demands. He does not ask much: merely the ability to write a decent rapid hand, to count swiftly and accurately, to spell correctly, to compose an intelligible letter, to know the commercial geography of the world, and to do what he is told without asking for explanations. In many cases all these demands may be met by an ordinary pupil if he is allowed a little time to settle down into the conditions of real business life. But apart from the actual skill required, there is need to provide for the fitting into the particular environment to which

each pupil is called. The school preparation must necessarily be general, and the business people have to make up their mind that a certain small amount of teaching work must in the last resort be left to them. Some years ago the Education Committee of the London County Council arranged for a series of conferences with employers of various types in order to get from " the masters " what they really wanted from the schools. The experiment was successful. No doubt rather exorbitant demands were in some cases made, and there was the inevitable tendency to do more in the way of pointing out defects than of suggesting remedies. But the exchange of views had an excellent moral effect: the employers were found to be much more sympathetic in the mass then they had proved as individual critics, the teachers on their side learning some things that proved to their advantage. In passing it was found that some weaknesses of human nature were laid to the charge of education.

On May 28, 1919, there came into being a society that could not satisfy itself with a shorter title than the Association for the Advancement of Education in Industry and Commerce. Even this garrulous description does not remove ambiguity, for suspicious folk are enquiring whether the Association exists to promote industrial and commercial education, or to further the general educational interests of those who are engaged in industry and commerce. The suspicion is supplied by Labour, as is not surprising, since the Association is made up of employers and their educational assistants and advisers. A glance at the published aims of the

Association shows that, while all kinds of education are taken into account, the bias is on those forms that are usually connected in men's minds with general culture. In the words of its circular, the aims of the Association are—" (*a*) The encouragement of definite educational work in [we take *in* to mean *in connection with*] industrial and commercial undertakings; (*b*) the general advancement of education by means of (1) the printing and circulation of papers; (2) investigation and research; (3) consultation with public educational authorities; (4) co-operation with other educational bodies; (5) the holding of periodical conferences." Nothing could be more straightforward than this statement of broad aims, and even Labour will find it hard to discover traces of the cloven hoof of capitalism.

Yet Labour justly believes it necessary to hold a watching brief for all educational matters. It is intensely anxious about the work done in schools, and is always afraid that the children will be trained merely in the interests of capital so as to become better cogs in the industrial wheel. A wise scrutiny here is quite commendable, for acquisitive human nature is very open to temptation. But there is a decency to be observed in such matters, and a firm hand should be kept on enthusiastic young partisans who let their zeal outrun their common sense, to the great disadvantage of Labour. There are many things we have all to be taught quite apart from our status as determined by the balance in our bank-books. At a meeting of teachers in London in January 1922, a lecturer dealing with the sober subject, " What is the Good of Education ? "

made the modest claim that the schools at least trained the pupils in habits of punctuality, regularity, thoroughness, industry, and discipline. One would have thought this at least a blameless list. But a labour extremist is reported to have taken up the matter on the spot, with the exclamation, "What an appalling list of virtues! They are the very things I am trying to get the people to abandon." He urged upon the teachers present to rebel—he did not say against what in particular, but just to rebel—in order to acquire the power of teaching "the rebel virtues," which, however, he did not specify. Naturally, solid Labour cannot be held responsible for such views, any more than it can be identified with the obscurantist opinions of a very positive person in the pages of Mr. Stephen Reynolds' *Seems So*:

> "You may learn summut at school, or you may not; precious little o' it's any use; but I reckon you learns manlihood and womanlihood after you leaves school, an' the sooner you begin to learn this the better. Education is the biggest fraud ever forced upon us."

Between these two extreme courses Labour is holding a very even keel, and seems little likely to go far wrong. The Workers' Educational Association is probably one of the most steadying influences at present at work in the educational world. Labour is fully alive to the possibilities of education: it is a pity that it seems more alive to its possibilities for evil than its possibilities for good.

In spite of all the successful work of Mr. Albert Mansbridge and his colleagues in the W. E. A., in spite of the renewed vigour of Ruskin College,

few working men have heard the name of Kant: still fewer have read a line of his work either in German or in English. Yet in one important particular the workers are Kantians to a man. When Kant leaves pure metaphysics and comes to living men and women, he makes an irresistible appeal to the working man by maintaining that a human being must always be treated as an end in himself, and not as a mere means. Here working people are with the philosopher heart and soul. He expresses exactly what they want. They have always resented, and with justice, the hideous synecdoche that labels them as *hands*. But while the world as a whole is with the workman in his rejection of the attitude that treats him as a mere tool, he must not forget that after all he is a tool. No doubt he ought to be treated as an end in himself, but he is at the same time a means. We all are. We must not overlook the importance of the word *merely*. We may be in the highest and truest sense ends, and yet in certain connections we may be means. However much soul and individuality a working man may possess, he has also hands, and in the ultimate resort he is in one connection a "hand." Unfortunately, the word has acquired a sinister connotation, and it is probably bad taste to use it in industry, but we must not burke the fact that it represents a truth. It happens that employers have not hit upon the use of the word "head" to represent those of their employees who work mainly with their brains. But there would be nothing really bad in an employer speaking figuratively about his "hands" in the workshop, and his "heads" in the laboratory.

To be sure, the psychologist comes along and pours oil on the troubled waters by assuring us that we cannot separate handwork from brainwork, and we are only too willing to drop the callous figure of the "hand." But if spirit and matter are so inseparable in our nature that philosophers have recently hit upon the compound word soul-body to emphasise this solidarity, there is all the more need to admit that we cannot educate one part of ourselves without educating the whole.

Employers are doubtless right in thinking that if they secure the education of the workman on the personal and spiritual side they are having him educated all round, and that in consequence he will become a more valuable means towards their ends. When we realise that we are all—employers and employees alike—both means and ends, there can be no objection to our being so trained that, while we become more valuable to ourselves as ends, we are at the same time improved as means.

So long as the employers recognise the personality of the employee, and do their best to develop that by means of education, they are entitled to any by-product that may accrue. It has to be remembered that increased mechanical skill, however produced, does not harm the workman—from some Labour complaints one would almost think it did—so he suffers no disadvantage if his general education incidentally increases his efficiency in mechanical operations. On the other hand, general education both enables the workman to deal more intelligently with his mechanical work and to invent ways of reducing the amount of the mechanical element

it involves. The old idea among callous employers was that education was not only unnecessary for workmen, but was positively injurious to their efficiency. What they wanted was a man who could do the mechanical work and not think about it. "We don't want our girls to think; we want them to do their work," was a complaint formerly common among the more brutal types of foremen, and even to-day it is not unfrequently heard. They wanted the workmen and workwomen to be mere means. The new spirit admits, even from the lowest standpoint, the need to recognise the "end" in every human being. From mere self-interest the employers have been led to see the justice and practical value of the Kantian Kingdom of Ends.

In some directions it is beginning to be recognised that factories and counting-houses must take a share in bridging the gulf between the generalised work of the schools and the particularised work of real life. Some book-keepers, for example, declare that they would much rather have young people come from school with no book-keeping at all than with the kind they get there, for the school-learnt variety only causes confusion in the stream of real business, where almost every house has peculiarities in its methods. Other business people, however, like their school material in not quite such a raw state, and want pupils to come with a knowledge of at least the principles on which business and industrial affairs are carried on. Accordingly, it is sometimes arranged that for a month or two before taking up business life pupils in a good secondary school should specialise on office routine. No great

harm is done to the school course, though many teachers complain with some bitterness that they are thus deprived of the opportunity of putting the final touches to an education that could be otherwise nicely rounded off. On the other hand, many head-mistresses are worried because they are not permitted to add book-keeping, shorthand, and typewriting in their higher departments, in order to meet the needs of girls who, if they cannot get these subjects at their secondary school, will have to go to private academies that make a specialty of what is called " commercial training."

Progressive teachers are, indeed, far from having neglected the view that they have to prepare at the same time for the school world and for the outer world. The two worlds cannot be kept apart even in a boarding school, much less in a day school. A secondary girls' school in London has for motto *Non scholæ sed vitæ*, and does not claim anything peculiar to itself in the view expressed. In truth, if the school wanted to make its real meaning baldly plain it would have to spoil the crispness of its motto by expanding it into *Non solum scholæ, sed etiam vitæ*. Whether the teachers will it or not, the school almost always, in the minds of the pupils, subtends a bigger angle than the world of the future or the outside world of the present. To the school pupil, in Wordsworthian phrase, it is the school world that is too much with him. But it is possible, and certainly desirable, to keep him in touch with both worlds.

One of the points of contact between the two worlds in the case of day schools is formed by home-

lessons. All teachers are aware of the keen interest parents take in this matter. We know that home-lessons are not popular with boys, and there is a grave suspicion that even girls are not enthusiastic about them ; but we do not sufficiently realise that ordinary parents regard them with loathing. Home arrangements are frequently upset by the inroads the teachers make on the home leisure of the pupils. Careless and indifferent parents simply do not allow school demands to interfere with their convenience, but even those who are keen for their children's advancement would willingly cut off home-lessons altogether, if they felt that they could do so without serious disadvantage to the future of their children. There can be no doubt but that the competitive spirit does much to maintain the parental toleration of home-lessons. Each father feels that if he discourages homework for his child, the youngsters from other homes will get the start as compared with his boy, and that is not to be tolerated. The fear of a handicap has done much to prevent revolt against the present homework system. But revolt is in the air, and it sometimes gets unexpected support from within the teachers' own camp. In her preface to *Supervised Study in English,* Miss A. Laura McGregor maintains that school-work should be so carefully organised that—

" the day's work can be effectively accomplished within the school. . . . The school must undoubtedly assume responsibility for such ' avocational guidance ' as will lead to the worthy use of leisure time ; but the mere assignment of tasks is an encroachment upon it which should be steadily resisted."

The suggestion here is one that meets with the approval of many parents. The idea is that the present school day is not too long—to put matters very gently from the parents' standpoint—and could be materially extended without harm to anybody. Why not, then, add the two or three hours that are at present taken up with home-study to the regular day's work at school? The pupil could in that case leave school at the end of each day with a clear conscience and a light heart, and no longer prove a nuisance to all the grown-ups at home.

To be sure, there are certain objections. The long school day might prove too exacting for the young people, the new plans might interfere with meal-hour arrangements at home, distance from school might make a late return by train at the crush hours undesirable. Then there are those who warn us that home-study has the very specific function of encouraging independent work on the pupil's own account.

These objections are not insuperable, and the line of development will almost certainly be a compromise by which the school day will be lengthened in some measure, while the internal organisation will be so modified as to make the school a much more human institution than it has hitherto been. The newer methods provide a clue to the path to be followed in our search for a more practical form of education, and one that will fit better into social requirements. If it be true that we teach too much, may it not be possible, by cutting down the periods for actual instruction, to make room for as much preparation in school as shall remove the necessity for homework?

There is a growing impression among the teachers of this country—it has been for some time openly expressed in the United States—that we spend far too much time on the teaching of the purely preliminary subjects. Quite a number of teachers think that the three R's should not be taught in the formal and systematic way at present in vogue, by which they are treated as substantive parts of the curriculum, but should be dealt with as tool subjects that get mastered by being used. Such critics say that they should be taken in the pupil's stride. Others, of course, are ready to object that the foundations of these subjects need very careful treatment to prevent the formation of almost ineradicable bad habits in phonetics, in the fundamental ideas of number, in the manipulation of the pen. The truth appears to be that, making full allowance for a fairly scientific and systematic treatment, these subjects could be taught in a much shorter time than at present. It is plain that the newer methods will certainly favour the more rapid acquirement of the three R's, since they are to be put into use at a much earlier stage than formerly. The example of the child in the educated home is significant here. He is accustomed from the very beginning to use the ordinary means of communication by voice, pen, and pencil. The child in most poor homes treats pen, pencil, and paper as things apart, things that belong to another world, the world of school.

There is one feature about the teaching of these instrumental subjects by themselves as separate studies that is exceedingly instructive in relation

to the newer developments of the curriculum. It is generally taken for granted that by devoting a great deal of attention to them more rapid progress will be made than if they were treated incidentally as part of a much wider group of studies. Experience is quite against this view, as is shown by what happened in the case of elementary school children long before any of the newer complicated curricula were thought of. At the early times reading and writing were the most important of the three R's, and, of the two, reading was by far the more important. So much was this the case that sometimes the schools became little more than reading schools, and when developments took place, and innovators persisted in bringing in other subjects—not only arithmetic, but composition and rudimentary geography and history—critics were prompt with their warnings that the promoters of such schools were sacrificing the substance for the shadow, and by seizing too much were in danger of losing what they already had. In other words, reading would suffer if much of the time formerly devoted to it was transferred to other subjects. Actual experience was far from bearing out this contention. Mr. Moseley, Inspector of Schools, in his report on Dean Dawes' King's Somborne School, writes :

" Here, where so many other things are taught besides reading, the children are found in advance, in reading, of other schools, in the majority of which scarcely anything else is taught." [1]

And again he generalises further :

" The singular slowness with which the children of our

[1] Quoted by Sir John Lubbock, *Addresses*, p. 71.

national schools learn to read is in some degree to be attributed to the unwise concentration of the labours of the school on that single subject."

It will be well not to lose sight of these references in dealing with the apparently overwide distribution of subjects in some of the school courses of to-day, and those proposed for to-morrow.

But it does not follow that any saving that may result from better methods will bring any relief to the selfish parent in the way of greater freedom from school influences at home. If better organisation on the Dalton or other plans develops interest in school activities, the tendency will be all towards carrying the interest of the school into the home. For one of the main purposes of the newer schemes is to bring the pupil's school-work into more direct relation to what is going on in the out-of-school world. The child's life is to be organised so that it becomes a genuine unity. The school and the world are to be so treated that he realises that he is living in one universe, not in two.

However successful teachers may be in creating this unity of conception, there will always come the moment of shock that necessarily accompanies the passage from the mixed-school-and-world universe to the universe made up of the out-of-school world alone. It is futile to maintain that there need be no real shock, that the passage should be so prepared for and anticipated that when it comes everything should go on with no serious break. No doubt a well-regulated educational scheme will minimise the perils of the passage from school to what is classed as " the real world." But a shock

there must be. It is useless to appeal to Nature as old Comenius used to do. Nature, he told us, makes no leaps, but proceeds step by step. No doubt, but she does do a gambol now and again. What about our coming into the world at all: is not that a bit of a leap? We can hardly think that the imago comes out of the chrysalis-state without a certain amount of excitement. The gradual humanising of our school courses will certainly minimise the trouble of passing from school to life-work, but at the best the change will involve an upset that educators will do well to take into account.

We have seen that certain progressive teachers are anxious to make such modifications towards the end of the school course as shall meet this trouble half-way, and that there are others who resent any attempt to introduce outside practical interests into the school course. There is a very general opinion that the definite preparation for life-work should be deferred as long as possible. To put it bluntly, the principle of many writers on education appears to be to discover how long a pupil can be educated in general without ultimate damage to his future vocation, and to keep him at general education till that point has been reached. In other words, how long can we afford to continue the education of the pupil without coming to the point about his future work? Without doubt, social prestige has often had a great deal to do with the determination of the content of what is called a liberal education. The long nails of the Chinese aristocrat are not without their lesson to

the educational thinker, and direct him to the consideration of the fallacy that assumes culture and utility to be incompatible. Many people entertain the notion that uselessness is of the essence of a liberal education. We do not forget the mathematician whose joy at the discovery of a dainty little theorem was enhanced by his being able to exclaim: "And, thank God, there can be no use made of it!" Last century, during one of the outside attacks to which the universities are periodically subjected, a defence appeared in *Blackwood's Magazine* in which the writer soberly and with no trace of humour maintained the thesis that a sufficient justification of the ancient seats of learning is to be found in the uselessness of what they teach.

What underlies all this is a confusion about the meaning of the liberal or free studies. These are the studies of a free man, studies that are not selected merely because the material needs of life compel us to undertake them. But the fact that a subject is capable of practical application to even the lower wants of life need not degrade it to the level of an illiberal study. What the advocates of the useless really want to praise is a totally different thing—disinterestedness. We can study mathematics in the spirit of either a philosopher or a huckster. We do or do not get the cultural value of the subject according to the spirit in which we approach it. A man who has mastered the higher mathematics at Cambridge with no baser aim than the attainment of a good degree, does not lose the culture his subject has brought him when he after-

wards applies his knowledge to the lighting of a city, or the draining of a swamp. How does the matter stand in the case of a man who deliberately studies mathematics with the deliberate ultimate purpose of applying his knowledge to just such things ?

We may find help in Lord Avebury's distinction between knife-and-fork studies and those others that may be called, by an extension of his figure, dinner-studies. The first group are obviously instrumental as compared with the second, and it would appear on the surface, at any rate, that all instrumental studies are really *Brotwissenschaften*, bread-and-butter studies. But a little investigation convinces us that the matter is not quite so simple as that. For the same subject may be either a knife-and-fork study or a dinner-study according to circumstances. Botany, for example, as studied by a girl in the fifth or sixth form of a secondary school, is a dinner subject with a good cultural value ; whereas the same subject has the purely knife-and-fork function of enabling a medical student to get through his examinations and make a satisfactory use of his *materia medica*. The crucial question is : Can the medical student also get from his studies in botany any of the culture value, or is that for ever denied him because of the utilitarian motive that no doubt in the first instance directs him to this subject ?

It has been argued that if a student at the time of undertaking the study of botany did not realise that it was to be of professional utility, it might possibly yield to him its culture value. But the implication of this curious argument is that somehow

or other the future use to be made of the knowledge acquired contaminates the study as a part of a liberal education. In arguing against this view, one has the unpleasant feeling of being among those who sin against the light. The taint of vocationalism is thrown over any subject that forms a definite and necessary part in the preparation for a specific mode of earning a livelihood. For, after all the discussions about the exact meaning of vocation in connection with education, this fact of being connected with the means of making a livelihood is found to be the ultimate *differentia*. The popular idea of a liberal education seems to be one in which the educand studies certain subjects set for him without having the least idea of making use of any one of them in connection with his future occupation, if that occupation is going to provide him with the means of living. Yet in actual life no objection is raised to the demand that an intending clergyman should first obtain an arts degree as a guarantee of general culture, before proceeding to his theological studies. The fact that his arts studies have a direct value in preparing him for his future work is not regarded as detracting from their culture value in his case. Why, then, should the engineer's mathematics, or the medical man's chemistry, be ranked differently?

The truth is that all education must affect our future life either adversely or favourably, and to that extent all education is vocational, as preparing us for the vocation of life. Existence as a country gentleman, or as a leisured member of society in a city, is a vocation and has to be prepared for like

any other. If some of our schools are specially fitted to prepare for this state of life, they are none the less vocational for that. Thomas Arnold's claim that the aim of his school was to send out Christian gentlemen in no way removed Rugby from the list of vocational schools—it only specified the kind of vocation for which it prepared. To be sure, the introduction of the idea of earning a livelihood involves an important technical difference. The Christian gentleman may want to be a doctor or a lawyer. He may even want to be an auctioneer or a plumber. The practical problem is how far the preparation for the two states may be combined without mutual disturbance. It is pure ostrich philosophy to maintain that culture demands a deliberate neglect of all considerations of vocation, till a good liberal education has been obtained. It sounds effective to say that at school we are not training an engineer, a doctor, a clergyman, or a journalist, but a man. Yet the manhood of the pupil is in no way compromised by giving his studies such a bias as shall prove of value to him in his struggle for life. It may be desirable to put off the incidence of the vocational as long as possible, and it may be that certain favoured groups are able to defer it till school-days are entirely over. The important point to be made is that whatever cultural elements appear in the curriculum are not at any stage contaminated either by the fact that they are brought into contact with recognised vocational elements or that they themselves are to be utilised in vocational work at a later stage.

It may clear up matters to examine how vocational

education is at present dealt with in our schools. It will be found that there are four degrees of intensity in the teachers' attitude towards vocational work. There are, first of all, those who timidly add a three months' top-dressing at the end of what they like to believe is a full cultural course. The next group take the matter more seriously, and introduce admittedly vocational subjects from the middle of the upper school on to the end of the course. In America this group goes a good deal farther than in England. Not because they value culture less, but because they find that the only way to save the cultural is to make friends with the mammon of vocationalism. The practical demands of parents and employers must be met at least half-way, for if this is not done then the High Schools will be completely cut out by the various commercial and craft schools that are being started all over the American continent.[1] Experience, in fact, is actually driving teachers who pride themselves on their cultural leanings to fall in with this half-and-half arrangement. Frequently, they adopt the plan timidly, and soothe their consciences with the suggestion that they teach the principles rather than the practice of the vocations in question.

The third group will have none of these half-measures. They claim that vocational education must be real. All this talk about teaching the principles on which vocations are carried on is dismissed with contumely. Dr. David Snedden, for example, cannot speak peaceably about it, and in his important work on *Vocational Education*

[1] Cf. Chap. VI in E. Davenport's *Education for Efficiency*.

(Macmillan Co., 1920) gives a vivid account of what he thinks real vocational education must be. Of the schools of compromise who content themselves with principles, he says:

> " The crying evil of this situation is, of course, to be found in the wholesale misdirection of energy which it entails. These hybrid schools do not usually give a fair, or in any sense acceptable, vocational education; they seriously misguide the pupil as regards a possible career and his qualifications therefor; and often they make no really worthy contributions towards the true and desirable ends of liberal or general education." [1]

Vocational education, according to Dr. Snedden, must be carried on under normal conditions, such as obtain in ordinary life, in real workshops, genuine factories, actual counting-houses. The sort of thing he has in view may be gathered from his requirements in the training of locomotive drivers. Instead of having a few yards of railway-line attached to the technical school, there should be available a line of rails extending for some thirty miles. As he calculates that there are no fewer than two thousand separate occupations for which preparation on this material scale is required, it will be seen that the practical difficulties are enormous, and, in fact, can be surmounted only by making each occupation responsible for the training of its own recruits—a reversion, in fact, to the old apprenticeship system under broader and more scientific conditions.

A fourth way of treating the problem may be

[1] *Op. cit.*, p. 75.

called tendencial, since it provides a training in certain directions that are in keeping with the natural tendencies of the pupils towards particular lines of work. By cultivating these tendencies the teacher prepares the pupil to take up with advantage some line towards which his inherent gifts supply a bias. Ginn & Co. publish a big book of 723 pages, entitled *Readings in Vocational Guidance*, where a great mass of evidence on this subject is edited by Meyer Bloomfield, the director of the Vocational Bureau of Boston. It contains one article in particular that has a special interest in connection with the point under discussion here. It is contributed by Dr. Herman Schneider, Dean of the College of Engineering at the University of Cincinnati. In this he has a series of dichotomies of human beings according to their preferences and capacities. They are divided, for example, into those that prefer mental work and those that prefer manual work: those who love uniformity and routine and those who love continual variety: indoor people and outdoor people: generalising people and specialising people: people who love responsibility and people who loathe it. He has many more categories, but these will give an indication of the sort of rough classification made by this director of studies for his own use in the allocating of students to the particular kind of work that is likely to lead to the most satisfactory results in after life. We are probably not yet ripe in England for the practical application of such a series of categories, but we are moving in that direction. Teachers are becoming increasingly inter-

ested in the future careers of their pupils, for the simple reason that parents are getting more and more accustomed to consult them on this matter. No doubt many teachers object to the assumption that they are to be held responsible for what happens to the pupils once the school has been left behind. If they are fond of big words, they say that the parents stand in an architectonic relation to the teacher, which, being interpreted, means that the parents are in the position of using the finished product turned out by the teacher. A natural consequence of this relation is that the teacher must take his orders from the parents, which, as a matter of fact, he has to do, even though the parental authority is delegated to certain administrative officers.

With the somewhat more human relations being gradually cultivated between parents and teachers, it is only natural that the parent should, wherever possible, consult the teacher, and ask him, as man to man, what he really thinks John should do in the way of choosing a vocation. The increase of this demand, whether from the individual parent or from the education authorities as representing the parents collectively, will inevitably lead to a study of the special bents and powers of the pupils not merely with regard to school activities, but with regard to the demands likely to be made upon them in their future vocations. It is quite clear that if a series of suitable categories were set up as the result of careful investigation, the teachers would be put in a much better position than at present for forming a useful estimate of the natural bent and capacity of

their pupils. In consequence, it will become increasingly easy to give just such a bias to the pupils' studies as shall make each individual a little better adapted to follow the vocation for which school standards indicate that he is best fitted. This tendencial treatment of vocational preparation does not interfere with the fullest development of the cultural side. It merely suggests a definite guiding of effort into certain lines of work that while cultural in themselves give a bias towards some particular vocation in which the pupil is likely to do his best and happiest work.

That final adjective introduces a consideration that is too often lost sight of in connection with vocational preparation. If the pupil is turned into an occupation that is not suited to him, he may earn a living right enough, but may never really enjoy life in the way he might have done had he been better guided. Following the Schneider dichotomies, we find that human beings fall into the two classes, those whose attention works best when allowed to range over a wide area, and those who enjoy work that demands attention to a very limited area. In allocating these people to their work in a great factory, if attention is paid to their peculiarities all goes well; if not, evil results follow. Here the bluff, hearty, well-disposed employer of labour on a large scale is apt to become impatient, and tells the experimental educationist that all this refinement is sheer waste of time. "If you were in charge of a great factory like mine, my dear sir, you would soon see how unnecessary all this fuss is. Put your wide-attention man to a narrow-attention

job, and your narrow-attention man to a wide-attention job, and I admit there will be a little uneasiness at the beginning, but in a few months things settle down and you never hear any more about it." Quite so. The manager hears no more about it. The misfit workman does not die. Therefore all is well. No account is taken of the permanently reduced vitality of the men put at the wrong sort of job. Many go through life with an almost permanent headache, the direct result of a vocational misfit. There is no doubt but that the schools in the immediate future will have to take up their share in setting right the method of adapting individual qualities to suitable environments.

The danger-signal is raised every time that any suggestion for improved school-work seems to have an economic bearing. But this tendencial treatment of vocational preparation can have nothing but a beneficial effect upon industry, even from the financial standpoint. It will naturally involve some correlation between the leaders of industry and the teachers, which in itself will be all to the good. But once the employers of labour have found out exactly the qualities they desire and have passed on their requirements to the teachers, the rest must be left to the schools. There is no need to interfere with the teachers' liberty of choice in carrying out their work. Once they know what is expected of them, it is the teachers' business to find means of attaining the ends set before them. Nobody else can do this for them.

This tendencial attitude towards vocational work will probably make an effective appeal to the English

love of compromise. The notion of shaping ends to meet future vocational needs will be sweetened to the teachers by the fact that it is unlikely that there will ever be vocational training at any stage at which attendance is compulsory. Even in America there has been no suggestion of such training at any school where pupils must attend. The Labour Party in England is keenly alive to the dangers of anything approaching vocational training, perhaps excessively so. But even the Labour Party should welcome the tendencial treatment of the matter, since it involves a clear field for the cultural elements. If culture can be combined with a bias towards some line of useful occupation, we should all welcome that bias. Training under these conditions would be equally applicable to all, and would have no tendency to turn pupils into convenient material to supply more useful cogs in the industrial machine. Cogs are needed, no doubt, and always will be, but the turning into cogs must be a matter for post-school activities. Some of the pupils, no doubt, will prove to be fit for nothing but being turned into cogs, but at least they will have had their chance during the school course.

From the practical teacher's standpoint, the conclusion of this whole matter appears to be that at the earliest stages we must do everything we can to make pupils feel at home in this world, without encouraging a marked distinction between the school-world and the out-of-school world, and only at the advanced stages should we begin to feel our way towards discovering special capacity for particular types of vocation. The fourteen-to-eighteen period

at present devoted (in theory, at any rate) to continuation work is a practical indication of the lines along which we are likely to settle our educational training problem, for all pupils except those who are fitted to undertake preparation for the higher professions. In the case of these last a reconciliation between the cultural and the vocational should be easy to arrange without outraging the sensibilities of anyone who has an acquaintance with modern educational tendencies and their literature.

CHAPTER III

STANDARDS AND MENTAL TESTS

AS a practical person the teacher wants to know as much as he can about the nature of his pupil, just as a plumber wants to know the qualities of the lead with which he works. As the plumber can learn all that he needs to know about lead without studying chemistry, so many teachers believe that they can find all they need to know about the pupil without falling back upon psychology. Maybe they are right, but in any case they admit that they want to know as much as possible about their pupils, and to know as accurately as they can. They feel that it is not an infringement on their private judgment to compare notes with other practical teachers, but this comparison does not go very far till they find themselves faced by the need for some common standard. They discover that each is inclined to have his own opinion and to hold to it, since there is no outside standard with which opinions may be compared. Up till quite recently each teacher has been his own standard, since most educational doctrine was mainly a matter of opinion. In other words, there was nothing but a subjective standard. Decisions were made according to the view of the person who had the authority. He was the final

court, and from his decision there was no appeal. In education there has always been this tendency to have everything determined by individual opinion. Certain educational processes are gone through; certain results follow in the lives of the educands. The causal relations involved are arranged by the individual observer to suit his own views. According to some, the Battle of Waterloo was won on the playing-fields of Eton; according to others, the Battle of Colenso was lost there. We have need of some standard that is independent of private opinion.

What is wanted, though the practical teacher does not usually care to put it in these words, is an objective standard. The plain man, and even the artist, can argue about colours and maintain his own view as against all comers, but now that science has discovered wave-lengths, there is a standard by which the colours of the rainbow can be compared, and any dispute about them settled definitely beyond all individual cavil. It cannot be maintained that education has been as fortunate as physics. Up till now the objective standard has been to seek, and has not yet been found. It appears, however, to have cast before it certain shadows that encourage seekers to persevere. The indications carry us to mathematics. Quantitative methods have been adopted of late in education, and hold out fair promises of leading us to something of the nature of an objective standard. It is probable that a completely objective standard will never be found available in any but the exact sciences, among which education is never likely to rank.

Still, there is a great attraction in some of the mathematical methods suggested. Of these the most promising are the correlation formulæ beginning with Bravais, but more usually associated with Professor Karl Pearson, who has extensively used this instrument of research, as has also Professor C. E. Spearman. The formulæ are used to determine how far the same forces are at work in different series of phenomena. If, for example, we set out in tabular form the amount of alcohol sold in each of the past twenty years, and in another table the number of railway accidents that occurred during each of these years, and then proceed to compare the tables, we might possibly find that as the amount of alcohol increases so does the number of accidents, or that as the amount of alcohol increases the number of accidents diminishes, then we would have a correlation established between the two factors alcohol and accidents. If, on the other hand, there is no correspondence at all between the two sets of figures, we say that there is no correlation. In the first case, if there is a perfect correlation—that is, if every increase in the one column is marked by an exactly corresponding increase in the other—we have a positive correlation, marked by the sign + 1. If the correspondence is exact as before, but in the opposite direction—that is, every rise in the one column being marked by a corresponding fall in the other—we have a negative correlation, indicated by the symbol − 1. If there is no correlation at all, the symbol is zero.

The formula preferred by Professor Karl Pearson is the more suitable for elaborate investigations

and where accurate data are available, but is, for ordinary educational purposes, a needlessly sensitive and complicated instrument, so the general tendency among teachers is to accept the Spearman formula, which is so simple that it is sometimes spoken of as his "foot-rule." It is sufficiently accurate for all practical purposes, and runs as follows :

$$R = 1 - \frac{\Sigma g}{M}.$$

Here R stands for the index of correlation, Σg for the sum of gains in a particular series of cases. M stands for the average number of gains to be expected in the long run if the ups and downs were due merely to chance. It is expressed numerically as $\frac{n^2 - 1}{6}$ where n stands for the number of cases considered. All this will be found either dismally familiar or desperately complicated, according to the reader's intimacy with mathematics.[1] But the

[1] Sometimes the non-mathematical teacher falls into despair when a book of the type of Brown and Thomson's *Mental Measurement* comes his way. But he must remember that our profession has now reached that stage of advancement that no one man or woman can venture to profess the whole theory of it. We are as much entitled to claim the privileges of the division of labour as the chemist, or, for that matter, the mathematician himself, for even he no longer dares to claim the whole of the field as his own. The teacher who " has no head for mathematics " may, with quite a good conscience, leave abstruse calculations to those whose business it is to attend to such matters. Yet his head will certainly not break under the strain of applying such a simple formula as is illustrated above. For those who have quite good mathematical inclinations, but have not had their attention directed to the newer

application of the formula need give trouble to no one. Its working is absolutely plain, as will be seen from the following example. The teacher wants to know whether there is a correlation between the ability of the same group of boys in Latin and in mathematics. Accordingly, he gets the Latin master

Boys' Names.	*Rank in Latin.*	*Rank in Maths.*	*Gain in Rank.*
Amberside .	5	5	—
Brereton . .	8	6	2
Cowan . .	12	11	1
Denison . .	2	3	—
Everton . .	4	7	—
Fernleigh .	11	4	7
Guthrie . .	6	8	—
Humberly .	7	12	—
Ilford . .	9	10	—
Jephson . .	1	2	—
Kettering .	3	1	2
Latymer . .	10	9	1
	—	—	13

to give them an examination and arrange them in order of merit according to the results, and the mathematics master to do the same thing for his subject. If the two lists of merit coincide, there

quantitative methods in education, it may be worth while to mention that all they want—and a good deal more—will be found in H. O. Rugg's *Statistical Methods Applied to Education* (Harrap, London). Less formidable books are E. L. Thorndike's *Mental and Social Measurements* (Teachers' College Bureau of Publications, New York) and W. I. King's *Elements of Statistical Method* (Macmillan Co., New York). Of more general interest is W. A. McCall's *How to Measure in Education* (1922).

is perfect correlation: we have + 1 for R, and there is no more to be said. But it is all but certain that some who rank high on the one list will rank low on the other, and the problem is to find a quantitative statement of the amount of agreement. For convenience, we take merely the first twelve names on such a list, as the principle can be as well illustrated by twelve as by forty.

Applying our formula we get:

$$R = 1 - \frac{13}{\frac{144 - 1}{6}} = \frac{5}{11} = \cdot 45.$$

This gives a positive correlation of ·45, which shows that there is a reasonable amount of correspondence between power to learn Latin and power to learn mathematics. We must not make the mistake of supposing that there have to be very high figures like ·98 or ·87 before a satisfactory correlation can be inferred. It will be noted that Fernleigh does a good deal to spoil the symmetry of the arrangement, which illustrates the fact that to get the best results of the formula it is well to have a considerable number of entries. But of this its inventor is well aware, and various mathematical checks are arranged for, in order to minimise the chances of serious error.

This formula has already been used a good deal in connection with school-work generally and examination results in particular, and has given satisfaction. But in all these newer mathematical applications there is a serious source of error against which practical teachers must be continually on their

guard. This is the misleading air of accuracy thrown over all investigations that can be expressed in mathematical terms. No doubt the mathematician keeps his bargain, and conscientiously and skilfully grinds out accurate results. But it is apt to be forgotten that in the first instance the grist that is brought to the mathematician's mill has had to be prepared by plain human resources. The arrangement of the boys, for example, in order of merit is not worked by mathematics, but by a fallible human brain. Making all allowance for human frailty, the results have been sufficiently accurate in the past to give practical guidance in some important school matters, particularly in connection with scholarship adjudication.

This leads us directly to the living child, who, after all, is the raw material on which the teacher works. The correlation formulæ aid in getting at a relative estimate of his capacities in certain directions, but are helpless in getting at his individual qualities. The thoughtful teacher is not in the least likely to underestimate the complexity of the problem presented by the child here and now present. No doubt we have to come to a rough-and-ready estimate of the nature of each member of our class, but there remains the inevitable desire for a somewhat more accurate gauge of qualities than can be obtained by mere inspection. Here too an attempt has been made to reach something like an objective standard. Something must be lost in the process of estimating the value of the pupil as raw material for the educator. We want to know the child as a whole in all his complexity, but as we recognise that

this is impossible, we set about looking for those qualities or that quality that have or has a dominating influence on the rest. It is a difficult matter to decide whether there is such a general factor at all, and if so which it is. Since rank in school depends upon quickness of learning, and this quickness is commonly spoken of as intelligence, the teacher naturally recognises this as the quality he would have selected on his own account as the one to be tested. Even under the old individual examination system the pupils in the elementary schools were subjected to intelligence tests by the government inspectors, though these resolved themselves mainly into questions to discover whether the pupils followed the meaning of passages selected from their reading-books. We shall find that historically this quality of intelligence was the first that the French psychologists set about investigating from the educational standpoint.

Now the practical teacher of these days is inclined to be impatient of the everlasting investigations into the meaning of words used in connection with his craft, but he must learn to realise that he cannot advance along the path of educational progress till he has mastered his terms. He must, for example, make up his mind about what this intelligence is. It is not quite the same thing as intellect, which has a much more abstract application, and is generally regarded as dealing with what is called pure thought. Intelligence, on the other hand, is usually connected with the things of ordinary life, applied thought, the fitting of means to ends by the use of ideas. It is sometimes described as mother wit,

the power of suiting our actions to the needs of each situation in life as it arises. The dignified refer to it sometimes as *savoir-faire*, the not so dignified content themselves with *gumption*. To it Bergson opposes instinct, in which there is a more or less uniform reaction to given conditions. We are gradually learning that instincts are not so rigid, and not even quite so accurate in their results, as we had been brought up to believe, but still the difference between intelligence and instinct remains practically that between adaptability and inflexibility.

Intelligence is thus a somewhat elusive quality, a possibility rather than an actuality, a mere potentiality. It seems almost impossible to give such an account of it as shall satisfy all honest enquirers. In fact, some are inclined to give up the attempt. "I doubt if we shall ever be able to produce an intelligent definition of intelligence."[1] But we can perhaps get at a working knowledge of its meaning by observing how it is used, and by following recent psychological movements. What the psychologists call the soul acts in a great variety of different ways, and the old-fashioned custom was to name each of these ways a faculty. This is no longer done, for it is recognised that the soul is one and indivisible, and not broken up into a series of separate entities with such names as perception, memory, judgment, imagination ; though, of course, we all do perceive, remember, judge, and imagine. No sooner did this faculty system get its death-blow from certain psychologists than other psychologists

[1] L. P. Jacks, *From the Human End*, p. 55.

set up investigations of a different kind altogether, and finally produced other results from their analysis. In particular, it was maintained that there is one general factor that may be analysed out from the special ways in which the soul acts, though it cannot be really separated from them. Professor Spearman labels this general factor with the letter *g*, and makes it correspond very much to what we have described as intelligence. Dr. E. Webb worked out a theory in favour of a second general element that he labelled *w*, the business of which was to attend to tenacity of purpose, the exercise of effort, and matters of that sort. Next, Dr. Maxwell Garnett comes along with a third general factor, which he labels *c*, standing for what is known as cleverness. At all this we have to shake our heads, and wonder whether we are not having the old faculties coming back again in a new form, and under fresh names. It suits our present purpose exceedingly well to have one general factor *g* (with which is incorporated, as "combined" newspapers say, the Webbian *w*, and the Garnettian *c*), which represents a quality of the first importance to us as teachers, and popularly known as intelligence.

The teacher has no hesitation in recognising the existence of this quality. He knows that he himself is intelligent, and he infers that his pupils are intelligent also. He is painfully aware that they differ materially in the amount or kind of the intelligence they show, and as this difference is of vital importance in his work, he looks with a favourable eye on any attempt to provide means of measuring intelligence. The general assumption is that each individual

is born into the world with a certain provision of intelligence, a provision that varies according to conditions that are at present little understood. This original intelligence is not fully developed at birth, but gradually moves upwards towards its maximum. It may be retarded by adverse circumstances, or favoured by good conditions; but there appears to be a maximum rate of progress that cannot be exceeded, even under the best circumstances. In other words, a certain minimum of time must elapse before the intelligence of an individual can reach its maximum. The development of the individual intelligence is correlated to the age of that individual, as will be shown later. In the meantime it has to be noted that a general belief is growing that there is a fixed time in the life of the individual beyond which there is no further development of the intelligence. When this age has been reached, there can be no further increase in intelligence.

Common sense and common experience at once rebel against this view, for it is quite obvious that at least some people act more reasonably when they reach middle age than when they were children or adolescents. Of course, it may be that a man has the same intelligence at forty as at fourteen, the difference being merely that at the later age he is infinitely more at home in his surroundings, knows a great deal more, and therefore can use his intelligence to better purpose. The startling view is gaining ground that the period at which intelligence ceases to develop is somewhere round about sixteen, so that after a pupil has attained that age, we may

leave age out of account altogether in estimating his natural intelligence. A practical result of the application of this principle to the data supplied by the American Army tests is that the work of the whole of the United States is being carried on with an intelligence no higher than that of a boy of fourteen. Naturally, we on this side of the Atlantic would never have dared to make such a statement. But it is not so devastating as at first sight appears, for a little reflection will show that so far as raw intelligence is concerned, most of our daily occupations are well within the reach of the intelligence of a boy of ten.

We may well leave the psychologists to fight out their own battle about the age at which intelligence reaches its maximum. What chiefly concerns us is the inherent differences in the intelligences that our pupils bring with them to school. Of this difference teachers need no demonstration at the hands of the professional psychologist. Most of them realise the existence of the various grades, and have acquired some skill in allocating pupils to their proper place in school. Few teachers would make any difficulty about arranging in order of intelligence the members of any class that they know well. Certainly a fair number of doubtful cases would occur between pairs of individuals of about equal intelligence. But if the problem is to divide a class of thirty-five pupils into seven groups of five, each group to be a shade lower in intelligence than the one above it, there are few teachers who would go seriously wrong. When the psychologist comes along and offers to supply a more accurate

means of testing intelligence, teachers differ in the reception they give him.

A small minority adopt a very suspicious attitude. They look upon the proposed technical tests with profound distrust. They regard them as the invention of more or less learned psychologists who may know psychology, but certainly know nothing about schools; who may know children in general, but emphatically know nothing about the actual children for whom professional teachers are made responsible. They feel that the theoretical testers hold themselves entirely aloof from the affairs of real life, and live and move and have their being in a dim realm of shadows, relieved only by the occasional gleam of brass instruments.

A second group, also a small one, is made up of credulous teachers who gladly accept with hardly any investigation the suggestion of an outside test by people who have no personal responsibility for the children tested. There is, in the eyes of such teachers, something almost magical in the new tests; they regard them with a certain awe as involving mysterious and unchallengeable processes that give results that cannot be gainsaid. It is easy to understand the comfort it would bring to an honest and painstaking, but not very clever, teacher to be presented with an authorised statement of the innate powers of each of his pupils. For such a statement would prove a shield and very present help in the time of trouble round about examination periods. To be sure, these credulous teachers will not find, and to do them justice they do not expect to find, that the result of such pre-

liminary testing will always be in their favour. A pupil may come to them with a very high intelligence mark, and may yet make a very bad appearance at examination time. Honest teachers do not resent being held responsible in such cases, so long as they are allowed to exercise the requisite amount of authority during the school year. Given a guarantee that the pupil has the necessary intelligence, many teachers are confident that they can produce good results.

Even the braggart schoolmaster Holofernes, in *Love's Labour's Lost,* feels it necessary to demand good stuff to work upon: "Mehercle, *if their sons be ingenious,* they shall want no instruction; *if their daughters be capable,* I will put it to them." Comenius overstates his case on the magniloquent title-page of his *Great Didactic* when he says that it sets forth "The whole Art of Teaching all Things to all Men," so that "the entire Youth of both Sexes, none being excepted, shall Quickly, Pleasantly and Thoroughly Become learned in the Sciences, pure in Morals," and so forth. In the text, however, he reconsiders matters, and does make an exception, as thus: "We promise then such a system of education that all the young shall be educated (except those to whom God has denied understanding)." [1] The word here rendered *understanding* comes near enough to what we have been calling intelligence to represent that quality without which the teacher, like Comenius, cannot profess to do satisfactory work. What depresses teachers is

[1] Keatinge's translation, p. 233 (original: *nisi cui deus mentem negavit*).

the presence of admittedly dull boys. Most teachers dislike dull pupils professionally, much as a shoemaker hates bad leather, since he has to stand or fall by what he can make out of this inferior material. It is fair that a teacher should be blamed for not producing good results in the case of intelligent pupils; but in the case of those others he may plead in the words of Schiller that—

"Against stupidity the very gods are powerless."

It is true that discriminating inspectors may be able to disentangle the absolute from the relative in such a case, and realise that a boy has made creditable progress in view of his innate dullness. But inspectors of this type are not too common, and the teacher may very gladly welcome such a recognised coefficient of intelligence as will prove to parents and others interested that certain pupils have to be judged by a low standard.

The majority of teachers belong neither to the credulous nor the unbelieving group. They are willing to take whatever help the psychologist can give, but claim the right to test his testing by applying their own criteria. They want to know how far his results fit in with their experience. They want to know in particular how the new tests differ from the old examinations.

Many teachers speak of the tests as if they were merely an abbreviated and somewhat more reliable form of examination. When they are on their guard, experienced teachers are quite willing to admit that ordinary examinations, whether internal or external, are far from reliable means of measuring

intelligence. Actual experience shows them—apart altogether from the endless arguments about "formal training"—that, generally speaking, their most intelligent boys do best at examinations. But they know that there are many and irritating exceptions. There are very able pupils who by their temperament are "bad examinees," and there are dull plodders who always at examinations get results above what their intelligence would seem to warrant. Further, there are the accidents that go so far to discredit the capacity-catching function of examinations. When investigated, these accidents are nearly always found to be connected with the subject-matter. The candidate has or has not, as the case may be, happened to have done recently some particular bit of work that chances to be set in the paper.

An experienced teacher is generally willing to agree that the practical difference between an examination and an intelligence test is that the first is a means of estimating attainment, while the second attempts to measure capacity. The subject-matter of instruction is assumed not to enter at all into an intelligence test. In point of fact, we know that in preparing tests every effort is made to eliminate whatever depends upon school attainments.

The question inevitably arises: Can we separate entirely capacity from attainment. It has to be admitted, to begin with, that we cannot test quite *in vacuo*; some subject-matter or other must be used in any test that we can apply. In practice, the difficulty is met by selecting what is common to

the mental content of all the persons under examination. If the tester can satisfy himself that all those to be tested possess the same knowledge of the matters submitted to them, he may fairly assume a general uniformity of standard in the results for all practical purposes. Yet it is found in actual application that because of certain previous experience and certain peculiarities of disposition and temperament, the same piece of knowledge has different effects on different minds. It has been pointed out, for example, that in the Alpha series of tests for the American Army the fact that two out of eight problems make a demand for arithmetical ability, places women at a disadvantage as compared with men. Naturally, this does not imply any sort of evaluation of the relative powers of men and women, but merely that in the matter of numerical calculation, for some reason or other, women test lower than men. It is not our present business to determine the precise degree of accuracy obtainable in testing capacity, but rather to find out whether we can attain such a degree of accuracy as shall enable the teacher to make practical applications of the testers' results. So far as our present knowledge goes, the actual position appears to be that we are justified in using these results for our practical guidance. But we must not expect so much help as teachers formerly hoped for. A writer [1] in *The Child* who was a trained teacher, then a lecturer on psychology at a university, and now is an inspector of schools under the Board of Education, and is therefore entitled to speak from

[1] Frank Watts, author of *Abnormal Psychology*.

wide and varied experience, gives us the following significant statements regarding the present status of these tests :

(i) The idea that innate capacity could be measured apart from the influences of education and training has proved barren.

(ii) The attempt to construct a single reliable test capable of measuring general intelligence has been given up as impossible.

(iii) A series of tests will give us a rough idea of the general average level of intellectual ability in a subject, if such tests cover a wide enough range of its most representative forms. But all average measures should be distrusted in so far as they obscure significant individual variation.

Perhaps the results of the rough-and-ready methods of testing for ability in the American Army have produced a too favourable impression on practical people. They served their purpose exceedingly well, and as they were applied on a gigantic scale —no fewer than 1,750,000 men being tested—the imagination is impressed, and the conviction arises that here, at least, we have conditions warranting the confidence even of the suspicious. The very fact that the testers confined themselves to general descriptions of classes instead of expressing their results in figures, gave an added sense of security. Only seven classes were adopted, as follows :

A.	Very Superior.	C−.	Low Average.
B.	Superior.	D.	Inferior.
C+.	High Average.	D−.	Very Inferior.
C.	Average.		

This is just the sort of thing we need in school, and, in fact, many teachers use a scheme of classification that is practically identical with it, though the basis of the classification is more general impression than specific testing. Other teachers take the view that though this sevenfold classification may be good enough for the practical needs of an army in a hurry, it is not accurate enough for the purposes of the professional educator. The lure of percentages and of the decimal-point is very powerful, and few there be who can completely resist it. The American Army classification resulted in three rather overcrowded groups in the middle, and a fringe of small groups at the extremities. The teacher wants a finer discrimination within the middle groups, and hungers for a numerical coefficient. Accordingly, a welcome was waiting for the formula that gradually evolved in the form of the Intelligence Quotient, familiarly known as IQ.

The Binet tests began with no numerical basis. Their original purpose was to discover which children were " defective " in the sense of needing a special kind of training. The Paris authorities recognised the need for separate treatment for defective children, but were brought up by the practical difficulty of determining which children were really defective. In their need they turned to their psychologists, but these had given this matter no particular attention. Professor Alfred Binet, however, at once took the matter up, and with the aid of certain teachers and others who knew school conditions he gradually evolved a set of tests that he believed were sufficient to determine the normal intelligence

of children at various ages, a departure of more than two years from which gave indication of probable defective status. Professor Binet's investigations resulted in two tables. One was called the *Barème d'Instruction*, a sort of ready-reckoner of the results of instruction which, when examined, is found to be a crude approach to the sort of thing that used to appear in the requirements of the different standards under the Education Codes. Experienced teachers of mature years smile as they glance at this apprentice-work of the distinguished psychologist. But the second table they treat with more respect, though with a certain amount of distrust. It is called *L'Echelle Métrique de l'Intelligence*. Here, again, the veteran of the old standard system in British schools smiles when he hears it claimed that " Binet was the first to utilise the idea of age standards or norms in the measurement of intelligence." [1] They know that an age standard of intelligence almost forced itself upon them and the parents of their children. All the same, Binet systematised the application of this age standard in such a way as to make it possible for his successors to give a scientific turn to its development, and provide a numerical basis of calculation. Lewis M. Terman and his helpers at Leland Stanford University, California, have taken up the work that Binet left unfinished at his death, and have so systematised the tests and correlated them to the various ages that they have evolved a scheme by which the much-desired quantitative coefficient may be legitimately reached.

[1] L. M. Terman, *The Measurement of Intelligence*, p. 40.

Professor Terman has invented a symmetrical scheme of tests, each test having a time value. It is found that the eleventh and the thirteenth years are a little anomalous: accordingly, no tests are prescribed for them. All the rest are arranged as follows:

Six tests for each year from 3 to 10, each test counting for two months.

Eight tests for twelfth year, each test counting for three months.

Six tests for fourteenth year, each test counting for four months.

Six tests for average adult, each test counting for five months.

Six tests for superior adult, each test counting for six months.

On the Binet scheme it was enough to find out whether a particular pupil did or did not come up to the standard for his years. But the above table supplies a means of estimating how far short or how far in advance a pupil is for his age. In other words, it is possible to determine what is called the mental age of a pupil. If a boy can do just the tests set down for his age, then his chronological age and his mental age coincide. But the tests are not limited to the chronological age of the pupil. He may not be able to do all the tests set against his ordinary age, and yet he may be able to do one or two of the tests for higher ages, and a calculation is necessary to determine his mental age. The starting-point is the year for which the pupil

can do all the tests. Then he gets credit for that age. Next he is tested in all the ages above that, getting so many months added on for each successful test according to the scale. Thus a boy of twelve may be found to be able to do only two of the tests set for the twelfth year. But he can do all the tests for the tenth year. Accordingly, he begins with ten years to his credit. For the two that he can do in the twelfth year he gets credit for three months each, making six months for that year. He can do also one of the tests for the fourteenth year, and for this he is credited with four months, and for doing one of the average adult tests he secures an additional 5 months, making a total of 11 years, 3 months as his mental age. With these data his IQ is easily determined, since it is the ratio between the mental age and the chronological.

$$\frac{\text{Mental age}}{\text{Chronological age}} = \text{IQ}.$$ In this case $\frac{11{\cdot}25}{12}$ gives

the IQ of ·94. To avoid the decimal-point it is getting customary to make the standard 100 instead of bare unity, so that this boy's IQ would be 94. Anything between 90 and 110 is regarded as normal or average, between 80 and 90 as dull, between 70 and 80 as dull bordering on feeble-mindedness, while anything below 70 is definitely feeble-minded. In the upper grades, between 110 and 120 we have superior intelligence: 120 to 140 brings us to that irritating "very superior intelligence," while anything above 140 borders on, and may reach to, genius. Professor Terman by a post-mortem set of tests, comes to the conclusion

that Sir Francis Galton would certainly have tested at something like 200, a figure that is matched by a Dundee boy who has been tested by Dr. R. R. Rusk. A New York prodigy of a boy has had a pamphlet written about him because of his IQ of 185. At Twickenham a milder prodigy came under my own observation in the person of a boy who at the age of 6 years and 5 months had a mental age of 11 years and 7 months, which gives an IQ of 180·5. An interesting feature of this case is that the boy was tested again almost exactly a year later. With all the necessary precautions to avoid repetitions, the result was almost exactly the same, his mental age being 13 years and 8 months and his chronological age 7 years and 6 months, giving an IQ of 182. This steadiness of result is the more remarkable that the boy had grown enormously during the intervening year, at the end of which he was 4 ft. 4½ in. without boots.

The Terman tests have not been long enough in existence yet to have established records of well-conducted tests verified by repetition under suitable controls, and by comparison with other means of estimating the intelligence of the subjects. But where verification has been possible the results have been satisfactory. Professional teachers have no lack of objections to the practicability of any such scheme of testing, perhaps the most prominent of which is the impossibility of getting a sufficient number of parallel tests to prevent the subjects from knowing beforehand the nature of the test, which would, of course, materially diminish its usefulness. Hundreds of investigators are busy

at work inventing series of parallel tests, but they are finding unexpected difficulties in getting uniformity. Testing the same set of subjects within a few days of each other produces different results. In applying the same test where the slightest part is left to the discretion of the tester, there is the possibility of material differences in result. Let it be admitted that we are only making a beginning of what may develop into the science of mental testing, but the fact remains that we have already rough-and-ready means of getting rapidly at the grade of intelligence of our pupils.

But even admitting that on the whole the tests work smoothly, it does not follow that the results can be applied directly to the classification of our pupils in school. Attainment, actual knowledge, is of the essence of the matter of placing a boy in his proper class. Two boys with the same IQ are not of necessity fitted to enter the same class in a given subject. Obviously, a great deal depends on what they have already done in that subject. There remains, accordingly, a place for the ordinary examination which, while not perhaps so accurate in determining capacity, certainly settles the question whether the pupil has the knowledge or skill to enter a given class with advantage.

Then, apart altogether from either intelligence or attainment, there is the further element of character. All the moral side remains yet to be worked up in relation to the tests, and there are many who bitterly resent the very idea of a scheme of moral tests. The teacher is certainly entitled to make moral estimates of his pupils, and to act upon

these estimates in his dealing with them, but few parents would be willing that moral tests should be devised and applied after the pattern of the present intelligence tests, and few teachers would care to undertake such work. Here we must carry on by observation rather than by experiment. It has to be noted that it is because of the general neglect of this aspect of the subject that, according to popular belief, there is such a discrepancy between school record and after-school record. Without doubt there is a far closer correspondence between the two records than is generally supposed. The attraction of striking exceptions and the neglect of negative instances have here their usual blighting influence on popular opinion, but the experienced teacher, in watching the career of his former pupils, finds that in the great majority of cases they turn out pretty much as their school record would have led him to expect. Where, however, the purely intellectual record of a boy is low, and his after success in life is great, the disturbing element is a moral one. The term must not be construed as necessarily implying something intrinsically meritorious. The moral qualities involved may be either good or bad. It may be that when the pupil goes out into the world he is stirred by fine motives to make a better use of his native intelligence than he did at school. But, again, it may happen that in the outside world he finds a scope for acquisitive and non-social qualities that were rigorously repressed at school, but are found to " pay " outside. The important point is for us to realise that this disturbing moral element has always to be taken

into account. When teachers are asked their opinion of the qualities of a pupil, they seldom even try to give their answer in terms of pure intelligence. They are not at all liable to the sneer directed at Descartes by his critic Gassendi, who addressed him in the words *O mens!* Even when the teacher does his best to confine himself to the purely mental aspect, he cannot get rid of the moral "psychic fringe" that Stout would say necessarily accompanies the teacher's concept of the pupil.

Not much has yet been done in the way of wholesale application of the intelligence tests to schoolwork. Experiments are being made by progressive teachers all over England and America, but they are largely in the laboratory stage.[1] Tentative efforts have been made to apply at least the principles of the scheme in the means taken to select the most suitable candidates for state and municipal scholarships. In this last use the danger of possible cramming for specific tests is very great, and the experimenters have had to expend an enormous amount of ingenuity and labour in inventing fresh tests for each occasion.

An interesting and instructive account of the direct application of the intelligence tests in a county secondary school is contributed to the *Journal of Education* for January 1922 by the headmistress, Miss E. M. Hughes. The material used was Terman's Group Test of Mental Ability. Among the interesting results obtained was a high correlation with the examination results of the

[1] For further information on this point see P. B. Ballard's *Group Tests of Intelligence* (1922).

same pupils at the Senior Cambridge grade. This correlation, ·58, is countered by the low correlation, ·21, between the test results and the teacher's marks for the term. The obvious explanation of the difference is to be found in what has already been said about the moral element, but Miss Hughes goes out of her way to explain the cause of fifty special cases of extreme divergence between test results and teachers' estimates. The causes she assigns are :

(i) The children in question being younger than the average of the form, which tends to the underestimation of ability.

(ii) The children being older, leading to overestimating of ability.

(iii) Indifferent health and consequent remitting of homework.

(iv) Difficult home circumstances—i.e. want of time in poor homes, and in very gay and pleasure-loving homes.

(v) Absorbing interest in boys.

(vi) " Swotting," together with the possession of a good memory.

(vii) Newness of the child to the school and want of sufficient time in which to judge her work.

All this throws into relief the simplicity of the intelligence tests, as compared with the necessarily complex process of getting at an estimate by general impression. The spirit of Miss Hughes' testing is exactly what it should be. The grim, shadowy, cold-blooded, disembodied intelligence—the ghostly *g* of the psychologists—is kept in its proper place, and the girls are treated as human beings.

But all this takes it for granted that teachers should do their own testing. Are ordinary teachers

qualified to conduct intelligence tests on their own account ? The psychologists are doubtful, and talk sombrely of at least a year's preliminary training, though the more optimistic are willing to let us off with six months. Miss Hughes does not appear to have heard of these forebodings, or if she has she brushes them aside with the handsome explanation that the testing is a simple matter that can be easily carried out by anyone accustomed to manage children. The two standpoints could be easily reconciled if we were sure that both parties had the same kind of testing in view. But the two are not the same. Miss Hughes has evidently in mind something much more of a slap-dash kind than the psychologists contemplate. Her methods belong rather to the American Army type than to that of the elaborate individual tests that the laboratory-trained psychologist has in view. Teachers are almost morbidly afraid of falling from grace in the matter of thoroughness, and are disinclined to take up any method that even seems to neglect this fundamental pedagogic virtue. But collective tests are quite accurate enough if only general conclusions are to be drawn. The Army tests and their derivatives are not very far removed from a satisfactory mean between pedantic refinement and sloppy amateurishness.

Many teachers bluntly say that they cannot afford the time for this technical testing. But Miss Hughes explains that she and her staff did the work of testing 300 pupils in the course of two days set apart—of course, with official sanction—for this purpose. She makes light of the labour involved,

and we gather that the effect upon her staff has not been prohibitive, for we are told that the school has resolved to test annually.

A less hopeful view of the value of the group method of mental testing is supplied in an account of an experiment by Mr. Andrew Bell, headmaster of the County School, Erith, published in the *Kent Education Gazette* for January 1922. Mr. Bell asks three questions, and after giving a full account of his methods, supplies answers to each.

(i) Does the Group Test offer a ready means of classifying the children in the upper standards of elementary schools ?

Answer : It must be acknowledged that the experiment seems to bear out the contention that the Group Test affords a means of roughly grouping the children according to intelligence.

(ii) Is the Group Test suitable for Scholarship children ?

Answer : In its present form the Group Test is not of very great service. The candidates are not in the highest standards, and the tests seem to need some modification to bring them to the level required for children of the age of eleven years. . . . Certainly there is no saving of time in the Group Test so far as correction is concerned, although, of course, the test itself can be given in little over half an hour.

(iii) Could it be used as a substitute for the present method of examination ? This means an oral test for all candidates who gain more than 50 per cent. of the marks for the written paper.

Answer : Let it be said at once that the personal contact with the candidate is most desirable, and this is emphasised by the experience this year with both the Oral and the Group Tests results. . . . So far, then, as the Scholarship Examination is concerned, nothing is to be gained by substituting the Group Test for any part of it, nor, indeed, by adding the Group Test to it in its present form.

This is a flattening report by an unbiased investigator on the application of the tests to a department where, on first principles, one would expect them to do their best work. The concluding sentence is particularly discouraging. Almost all experienced teachers and administrators will endorse what is said about the value of the personal interview. This is a recognition of the importance of the moral elements already dealt with. But perhaps Mr. Bell goes too far when he denies to the tests even a subordinate place in determining the claims of scholarship candidates. Even on the Rhodes Scholarship basis, that takes account of physical and social as well as intellectual qualities, there is at least a place left for the native intelligence, and the intelligence tests, when better developed, will certainly be of great help here.

Having regard to the present state of development of the tests, there arises for the plain, straightforward, conscientious teacher the problem of how far he is able, and how far he ought, to take part in the testing of his pupils by the new methods. Modesty, no doubt, plays an important part in making some of us disinclined to undertake this sort of work; but we must be careful not to let our professional conservatism exercise an undue influence here. A compromise that is full of hope is to begin by acquiring, at any rate, a working knowledge of the tests and their possibilities. No teacher should be in the humiliating position of not knowing what the tests are, and how they are applied. P. B. Ballard's admirable little book, *Mental Tests*, can be mastered in a week's spare

time ; L. M. Terman's *The Measurement of Intelligence,* and its accompanying *Test Material,* would not demand very much more ; while the *National Intelligence Test* (Harrap, 2*s.* 6*d.* net) may be dealt with in an hour or two. Acquainted with this literature, the teacher is in a position to make up his mind about the value of the system, and to come to a reasoned conclusion regarding his responsibility in the matter. Even if he makes up his mind that this sort of work is not for him, he will be able to talk intelligently about it, and to take part in any system of testing that may be imposed on his school, either by the head or by some outside body. For we must realise that testing is in the air, and is likely to become much more common in the near future, even if those critics are right who maintain that it has had its day and by and by will cease to be.

In actual school practice, at the moment, testing has two quite distinct spheres—(i) the testing of normal children ; (ii) the testing of defectives and supernormal children. With regard to the first, all teachers are concerned, whether they are prepared or not to take an active part. With regard to the second, the matter should certainly be left to the specialists. This does not mean that teachers who have a bent that way should not themselves by and by win their way into the specialist grade. Indeed, it is highly desirable that as many teachers as are drawn that way should be encouraged to go on. It is for the profession to consider whether it is willing that a portion of its field should be handed over to outside practitioners.

Even as things are, at least some teachers are jealous of the intrusion of the doctors. Are we to permit or encourage the intrusion of the practising psychologist? Elsewhere[1] I have dealt with that official who appears to be hovering on the horizon, and whom I have labelled the "educational engineer." When this official is firmly in the saddle, the professional teacher may have to submit to much more direction than he has had in the past. The only way to save our educational liberty is to make ourselves really masters of our craft, both in theory and in practice. This advice is particularly apposite with regard to the educational psychologist. We cannot all do testing work: we have neither the time nor the skill. But our professional honour demands that we should make ourselves familiar with the system, so that we may appreciate what is being done. No doubt in the near future school inspectors of all sorts will have to take a share in testing of the newer type. In self-defence teachers will need to master the mysteries of a process that may, on occasion, put them at a disadvantage, if they do not know how to deal with it. But a better motive than mere defence is the professional one. We must master the principles of intelligence-testing, because it is an essential part of our equipment as self-respecting craftsmen.

[1] *Evolution of Educational Theory*, pp. 381–84.

[My cordial thanks are rendered to my colleague Prof. T. P. Nunn for reading and criticising the MS. of this chapter, on the subject of which he is an acknowledged authority.]

CHAPTER IV

SCALES OF ATTAINMENT

PAGE 27 of the 1910 edition of Professor Binet's *Les Idées Modernes sur les Enfants* presents a ready-reckoner of instruction that we have seen rouses the amused contempt of every experienced British elementary teacher. It is not prepared by M. Binet himself, but was " organised by M. Vaney for the primary schools of Paris." The attainments of pupils from six to eleven in reading, arithmetic, and spelling are to be estimated by tests for five different stages. A single arithmetical problem at each stage is all that is supplied, a single scrap of dictation including only twelve words is to meet the needs of all ages for spelling, while reading has the five stages marked by the following bare descriptive terms: (i) sub-syllabic or syllabic; (ii) hesitating; (iii) hesitating or fluent; (iv) fluent; (v) fluent or expressive. Still, when he passes from this bald and unconvincing programme to the elaborate scales now provided by American educationists, the expert elementary teacher is hardly better pleased. He is as much repelled by the American complexity as by the French simplicity.

It is not that teachers are satisfied with the existing rough-and-ready ways of estimating pro-

gress in school-work. They have no excessive belief in examinations as at present conducted, and in their hearts they know that their own impressionist way of estimating their pupils' work is not quite reliable. They do not need the evidence painfully gathered by American investigators to prove that the markings of the same bits of written work by different teachers are far from agreeing with one another. They long for an objective standard, but they are suspicious of what is sometimes presented to them as supplying their needs. The intelligence tests they are inclined to accept without much cavil, for they are based on more or less technical psychological investigations that they feel to be outside of their ordinary professional range. Besides, after all, the results do not in any way reflect upon their work in school. No one can blame the teacher for the low IQ of his pupils.

When it comes to scales, however, a new element enters, for the term is gradually limiting itself to modes of estimating the results of the work done in schools. It would be very convenient if the term *test* could be definitely limited to the gradually expanding series of problems and exercises that have for aim the measurement of intelligence, while *scale* is reserved for any material invented for estimating the acquisition of knowledge or of skill. Generally speaking, a scale implies some sort of concrete standard by reference to which an actual comparison may be set up. We shall find, for example, that the handwriting scale consists of a set of standard specimens. This sheet of specimens is sometimes placed on the wall of the schoolroom,

and it even has a technical name, "graphometer," though somehow the name is seldom used. There are similar concrete scales in drawing, spelling, composition. In arithmetic, however, the scales consist rather in sets of problems that are standardised, no doubt, but are not represented by a sheet that may be used for purposes of direct comparison. The same thing applies to geography, history, music, where progress is estimated by a series of exercises that will have to be called tests, unless we can agree upon the distinction that limits this term to the measurement of intelligence apart from what it is exercised upon, while scale is used to denote all means of measuring the acquirement of knowledge or skill.

Since this limitation would make the scales cover the ground formerly regarded as the special province of external examiners, it is natural that teachers should look upon them with some degree of suspicion. It is true that scales may well be used by the teachers themselves as a means of estimating the success of their work so as to improve it wherever possible. But it cannot be denied that they may be used by others with the good, old-fashioned purpose of criticising the teacher's work. It is natural, therefore, that they should look askance at the new scales. This fact may to some extent account for the other fact that almost all the investigations in this department have been made on the western side of the Atlantic, where the scourge of examinations is not so severe. It is encouraging for British teachers to learn, all the same, that the movement in America has reached

that stage that calls for the direct co-operation of the teachers themselves. Naturally, at the beginning the matter was left largely in the hands of experts in psychology and education: university people and directors and superintendents of schools. But now there has been sufficient progress to make it possible for the ordinary intelligent teacher to take a hand, and use the acquired material on his own account.

The whole movement is quite a recent one, going no further back than to 1864, at which date, according to Professor Thorndike, the first "Scale Book" in writing was prepared by the Rev. George Fisher, of the Greenwich Hospital School. The American founder of scales was Dr. J. M. Rice, who, after a course under German psychologists, came to the conclusion that none of his fellow-schoolmen really knew the facts of the educational situation,

> "because there were no standards to serve as guides. Then one day the idea flashed through my mind that the way to settle the question was to try it out. For a beginning, I decided to take spelling, and on that very day I made up a list of 50 words, with the view of giving them as a test to the pupils of the schools as I went on my tour from town to town. I have no record of the date of the inspiration, but I think it was some time in October 1894." [1]

One's mind is irresistibly directed to the ruins of the Capitol at Rome, but, after all, Dr. Rice is entitled to take himself a little seriously, for the

[1] *The Seventeenth Year-book of the National Society for the Study of Education*, Part II, p. 11.

movement he began that October day is having somewhat important developments.

Though in England our pioneer scale-maker did not succeed in setting on foot a deliberate cult of scales in the various school subjects, such scales developed to some extent of themselves, during the lamentable period of individual examinations held to justify the payment by results. In consequence of the extremely wide application of test-cards in arithmetic all over the country, a sort of scale in that subject evolved itself, though it was never reduced to a systematic statement. Experienced school inspectors in the old days could have set forth with no difficulty an arithmetical scale that could have held its own with the Courtis or any other of the new ones. But in handwriting the inspectors depended on the ordinary general impression, so that Professor Thorndike had an entirely fresh field when he issued his first scale in 1910, which came to be known in England through being incorporated in his *Education: A First Book*, in 1912.

In the evaluation of handwriting there is much more involved than is at first apparent. In the charmingly direct way of our old school method books the three essentials of good writing are stated to be legibility, elegance, and speed. Thorndike neglected the speed with which his specimens were produced, and founded his decisions on the opinions experts formed on a basis that included the qualities of appearance and legibility. His method of preparing his scale consisted in procuring from the pupils in the three highest grades of the ordinary

American Public Schools one thousand specimens of handwriting of all degrees of merit. In the first rough classification it came about that different investigators found that, without any previous theorising on the matter, the papers sorted themselves out into eleven groups. Accordingly, the thousand papers were sent to one after another of forty persons accepted as experts in the criticism of handwriting, with the request that each of them should arrange the thousand specimens into eleven groups. To secure accuracy, each expert did the grouping two or three times, and his final result was the *average* mark he allotted to each specimen. Finally, the average of the forty different persons' ranking gave the final rank of each specimen. In this way a series of groups was obtained, each being separated by approximately equal differences in merit. Typical specimens of each group were selected, and thus a scale was provided with which any given piece of handwriting could be compared, and as a result placed in one or other of the groups. If there was no one group that seemed to be the exact place for a given fresh specimen, it could be placed between two of the groups, and if great accuracy were aimed at, it might have a decimal added. Thus a specimen that was not good enough for group eight, but was nearer eight than seven, might be labelled 7·6 or 7·7.

One obvious difficulty is that handwriting differs in style and appearance apart from legibility, so in each group three specimens were selected, each exemplifying a different style, though all three were regarded as equal in general merit.

Dr. Leonard P. Ayres, of the Russell Sage Foundation, New York, was not pleased with a scale that mixed up elegance and legibility, so he prepared one of his own, based entirely upon legibility. It was found easy to get a numerical coefficient of legibility by discovering the time taken to read a given piece of handwriting. Specimens of handwriting were obtained in the form of disconnected words that did not make sense. This was necessary in order that reading should not depend on context, and that the memory of the tester should not be called into play. All manner of further precautions were taken, such as repeating the reading of the first batch of papers after the readers had got into the swing of the thing, for at first they would probably read a little slower, and the first marking would be inaccurate. Writing was thus ranked according to the number of words read per minute. It was found that the rate of reading was 130·2 words per minute for the worst writing and 209·6 for the best. Naturally, Ayres arranged his scale into eight groups, according to the Thorndike plan, with the three different styles in each case.

The critical teacher faced with either of these scales at once realises that in the ultimate resort the decision lies with him. It is for him to place in the appropriate group each specimen his pupils provide him. He cannot escape that responsibility. In the last resort, the scale itself is not objective. It is the result of a series of particularly competent subjective judgments so arranged as to control each other and lead to a reliable average. There can be no doubt but that the scale in itself is a practical

help to the teacher who uses it, even if in the first instance and in the final application the scale depends upon a subjective decision. Such scales have really two functions, one the provision of a standard as nearly objective as possible, the other the stimulation of the critical powers of the person who uses them. Not only do they serve as measuring-rods, but, as Professor Thorndike observes, they have an excellent effect upon those who apply them "by creating in the minds of teachers a mental standard to be used in even the most casual ratings of everyday school life."

Yet all the way through, both in reaching the actual paper scale and in using it as a basis of estimating the merit of a particular specimen of handwriting, there is a continual reference to the opinion of this or that investigator. In writings on the subject the phrase is constantly occurring, "by So-and-So's scoring" — by Dr. Rice's scoring, by Dr. Stone's scoring, by Dr. Thorndike's scoring. The general effect is one of uncertainty and doubt. It is true that confidence comes when such phrases are used as "when a specimen is regarded by impartial judges as falling exactly between 11 and 13, it may be safely marked 12." But behind this is the demand for the backing of numbers, and we long for a scale that can be applied by ourselves with confidence that when another tester comes along his scoring will exactly coincide with ours, automatically and as a matter of course.

If the ordinary successful practical teacher were asked which of the school subjects lends itself best to scale-making, he would almost certainly choose

arithmetic. There is something very alluring in the definite *Right* or *Wrong* with which each attempt may be labelled. There is, as a matter of fact, less surprise shown at an arithmetic scale than at any other. Teachers have been for long accustomed to a series of problems of different degrees of difficulty accepted as a standard of efficiency in this subject. And yet in actual practice arithmetic is found to be more than usually refractory material for scale-making. When Mr. S. A. Courtis started on this work, he found, to his surprise, that pupils differed considerably in their ability to deal with each of the four primary operations. They might be excellent at addition, but weak in multiplication, and just moderate at subtraction. In other words, each has a different coefficient of ability for the different arithmetical operations, and so far as investigations as yet have gone, it would appear as if this original coefficient remains practically unchanged through life. In any case, it is assumed that for a scale in arithmetic it is sufficient to include the four primary operations, as all the rest of arithmetic is merely an extension of the application of these. This, indeed, is only one of the many ways in which the new conception of arithmetic is affecting practice. The subject is no longer treated as essentially a separate subject, after the preliminaries are mastered, but as the science or the study of the quantitative aspect of human activities.

Courtis' arithmetic scales, which are at present by far the most commonly used in the world, are very simple and convey an impression of genial familiarity to our English teachers. The crude

A Series have now disappeared and their *B* successors consist of separate groups of addition, subtraction, multiplication, and division examples, the members of each group being of approximately equal difficulty. Mr. Courtis is anxious to make us realise that they are " neither lesson-sheets nor examination papers." They are to be used as measuring-rods, and though they cannot be guaranteed to be absolutely equal, any one of the rods may be confidently used as a standard. The scales are intended to be applied to all the grades, for there is no more need to have a special scale for each grade than there is to have a special foot-rule for measuring a particular group of men. The same scale may be applied in such a way that the elements of speed and accuracy may come in as differentiating influences and set up a standard of grading. It is admitted that the Courtis scales set up a much higher demand than that which would satisfy business conditions, for there is nothing more surprising to the outsider than the simplicity of the arithmetical processes demanded in ordinary business. Certainly difficulties of the most distracting kind occur, but these do not involve the mere arithmetical processes. Teachers who are harassed by the exorbitant demands of the heads of counting-houses, might do worse than turn to G. M. Wilson's *A Survey of the Social and Business Usage of Arithmetic*.[1]

Teachers have not been content with scales that merely determine attainment. They want means of discovering not only to what extent pupils go wrong, but in what directions they go wrong, and

[1] Teachers' College Bureau of Publications.

why. Accordingly, they seek out diagnostic scales. At first the scales of Dr. Clifford Woody had not this special end in view, but they gradually so developed as to lend themselves to the teachers' purpose, and enabled them to analyse out processes, and locate the sources of error. What differentiates them primarily from the Courtis scales is that they are based on an increasing grade of difficulty, instead of on the nearest approach to equality. The Woody scales have to pay for their increased usefulness in one direction by a certain loss of exactness in another. For they introduce that complication that English teachers recognise as so baffling, the evaluation of the processes as contrasted with the actual results. An " answer " is obviously correct or incorrect ; it admits of no argument. But the process by which that answer has been reached opens the flood-gates of controversy. Many practical teachers cut the knot by saying that the ultimate test is accuracy ; if the answer is wrong, it is of no consequence how it was attained. Most teachers, however, take the more reasonable view that so long as the pupil is a pupil, his methods are of great importance. When he leaves school, it is, no doubt, reasonable enough to maintain that the only things that interest his employers are the accuracy of his result and the speed with which he reaches it. But in school we are still interested in the process, and therefore welcome the diagnostic qualities that belong to some of the scales. For the primary purpose of scales, however, it is not essential that we should use complicated arithmetical problems, and, in fact, the more complicated

these become the more we pass from pure arithmetic into the complex maze of life itself.

Some of the other subjects lend themselves more to objective treatment. Take spelling, for example. Here the good, old-fashioned way was to test pupils by setting a large number of particularly difficult words, and by judging the best speller to be the person who succeeded with the greatest number. As an absolute test, there is not much to be said against it, but as a scale to be used in school-work it leaves much to be desired. It is quite possible to make a selection of words according to their difficulty as proved by experimental methods, and to use this list as a test. Each such word could be supplied with a coefficient of difficulty and its value as a test rated accordingly.

Professor W. Franklin Jones has provided such a list of one hundred words graded in this way, each word being supplied with a figure indicating the number of times it had been misspelled in the tests by means of which the selection was made. The top of the list is occupied by *which*, accompanied by the figure 321. Next come *their* with 316 and *there* with 296. Obviously, these two should in some way or other be counted as one. It is not so much that the children cannot spell either of these words, as that they are so often in doubt which is which. The same applies to *here* (278) and *hear* (280). But all such lists contain surprises for the teacher. Who, for example, would regard *they* as a 270 error word, while *ache* accounts for no more than 192, or that *some* could lead 270 astray, while *believe* is content with 212? Supposing a pupil

learnt to spell correctly the list of one hundred words that Professor Jones whimsically calls "spelling demons," he would be in a much better case than before, except in the case of the words with the same sound: which suggests the preparation of a more extensive list that would really account for all the more common sources of disaster. The idea of such a list is certainly not new, but the nature of the recent lists is quite different from that of the lists of former times. Words are selected not because of their difficulty, but of the frequency with which they occur. The new principle is that the words to be taught are those that are most likely to be needed. Dr. Daniel Starch, for example, tabulated 40,000 consecutive words, about 1,000 from each of forty authors in eleven current high-grade magazines. This gave 5,903 different words, as follows:

3,111	words	occurred	each	once.
1,009	,,	,,	,,	twice.
512	,,	,,	,,	three times.
280	,,	,,	,,	four times.
189	,,	,,	,,	five times.
121	,,	,,	,,	six times.
97	,,	,,	,,	seven times.
82	,,	,,	,,	eight times.
53	,,	,,	,,	nine times.
225	,,	,,	,,	ten to nineteen times.
224	,,	,,	,,	twenty or more times.[1]

Comparing this list with a similar one prepared by Mr. Eldridge of Buffalo, Dr. Starch calculates that the words occurring three or more times on

[1] *Educational Psychology*, p. 328.

both lists make up more than "nine-tenths of all running words." By selecting all the words that occur three or more times on both lists, a total of 2,626 words is attained, and a pupil who masters this list has an adequate preparation for ordinary life in the way of spelling.

The schoolroom, however, is not quite content with this general guidance: it wants a more detailed analysis. This is provided by Dr. Leonard P. Ayres. By elaborate analyses he has reached what he is convinced is the thousand most commonly used words in the English language, and has had them tested by 1,400,000 spellings made by 70,000 pupils in 84 cities of the United States. As a result, he has been able to arrange his thousand words into twenty-six columns, one for each letter of the alphabet, and these groups are correlated to the different grades of an American school, in such a way that the percentage of correct spellings that should be found in every average class can be determined by inspection. We have, in fact, reached something not very far from an objective standard, so far as spelling is concerned.[1]

In the matter of oral reading, there is not much change in the newer tests. Suitable paragraphs are prepared for the tests on separate sheets, and

[1] Copies of this table may be had for five cents apiece from the Russell Sage Foundation, Division of Education, 130 East 22nd Street, New York City. But the table is not of nearly so much use to an English teacher as to an American. The usages of the two countries are by no means identical, and words that are the most frequently used there are not always the most common here.

the time taken is recorded with a stop-watch. For the actual testing, however, the teacher has to depend on his own impressions. No doubt an advance has been made in the way of classifying errors. These are arranged under six headings: complete mispronunciation, partial mispronunciation, omissions, substitutions, insertions, repetitions. The scoring is elaborate, and on the whole the scheme is an improvement. But it is in the testing of silent reading that the newer methods get their chance. The Monroe Standardised Silent Reading Tests take the very simple plan of giving prepared pieces for silent reading, each piece being accompanied by a suitable question or tiny problem to test whether the matter has been understood. The rate of reading is also recorded, for it is found that there is a high correlation between the rate and the degree of comprehension. Generally speaking, the quicker readers understand more completely. But it is possible to test comprehension apart altogether from speed of reading, and, in fact, in Dr. Thorndike's scheme the pupils are allowed to read and reread their pieces as often as they wish.

Dr. Starch, however, makes time an essential element in his tests. Each pupil is allowed to read for just thirty seconds, then he must turn over his printed sheet and write on the back of it as much as he can remember of what he has read. Then what seems a curiously mechanical method is followed in estimating the comprehension of the meaning. The number of written words that accurately reproduce the ideas of the original passage is taken as the score made by the pupil. All the

words that misrepresent what the original passage meant are struck out; all words dealing with ideas not in the original are also cut out. So are all words that repeat ideas already expressed. Unsatisfactory as this appears to be at first sight, it seems to get fairly accurate results, and it has been successfully applied on this side of the Atlantic.

The following table will not be of so much use to English readers as to American. But a general idea of its meaning may be had by treating the first grade as representing the work of the seventh year (i.e. from 6 to 7), the second the eighth, and so on.

Grade.	Speed of reading (words per second).	Comprehension (words written).
I.	1·5	15
II.	1·8	20
III.	2·1	24
IV.	2·4	28
V.	2·8	33
VI.	3·2	38
VII.	3·6	45
VIII.	4·0	50 [1]

It may be added for purposes of comparison that the result of testing several classes of experienced secondary schoolmistresses in England gave an average rate per second of 6·3.

Dr. Starch has been challenged for mixing up English composition with his search for an index of comprehension, but replies that if written work is a handicap, it applies to all the persons tested, and he is very sceptical about *the existence of pupils who are at a distinct disadvantage* in writing as

[1] *The Scientific Measurement of Class-room Products*, Chapman and Rush, p. 93.

compared with speaking. About this there may be difference of opinion, but it at least adds zest to our quest for a scale in English composition. It is at this stage that we appear to get out of our depth, which is a pity, for we have now reached just that point at which vague personal impressions have been in the past the guiding principle. Marking compositions, and particularly essays, has always been admitted to be a matter in which the personal equation counts most heavily in school-work. It is because of this that many teachers object to give numerical marks for composition and confine themselves to a letter or a phrase. An *alpha*, a *beta*, or a *gamma* is as far as such teachers care to go. But our new scale-makers are not daunted even by the perils of composition, and set methodically about their work. The earliest attempts of Rice, Bliss, and Courtis are summarily dismissed as being so lacking in precision as not to deserve further consideration, at which we cannot pretend to be surprised, since these primitive creatures knew no better than to use such terms as *excellent*, *good*, *poor*, and other familiar ways of expressing their general impression.

In *The Teachers' College Record* for September 1912, Dr. Milo B. Hillegas produced *A Scale for the Measurement of Quality in English Composition by Young People*, which consists of ten specimen copies of composition arranged in order of merit. When the question is raised about the basis on which merit is to be estimated, Dr. Hillegas appears to get out of the corner with some address. The term *merit* he assures us " means just that quality which

competent persons commonly consider as merit, and the scale measures just this quality." As the enquirer naturally considers himself a competent person, he has the answer within himself, and Dr. Hillegas departs in peace, leaving, however, a sorely perplexed enquirer behind him. When he examines the specimens, the teacher does not know what exactly to do with them. The sample marked *zero* is mere incoherent nonsense, but the rest do seem to justify the order in which they have been placed. Yet the teacher who comes to this scale with a fresh composition in his hand, has his work cut out to fit it into the proper group. There are so many different things to consider. What is called the *Nassau County Supplement to the Hillegas Scale* does seem to have proved of assistance to the teachers who used it, but, in all probability, the real benefit they received was in the added interest of a new method, and the attention they thus gave to the elements that make up the merit of a composition.

One objection to this scale is that it gives at each stage only one kind of composition, so the Public Schools of Newton, Massachusetts, developed the scale so that it had four distinct groups of specimens, one group narrative, another descriptive, a third expository, and the fourth argumentative. This helped matters to some extent, but the greatest improvement consists in the classification of the errors to be noted and the amount of deduction to be made in respect of each. On what is called the *Willing Composition Scale*, compositions are graded from two standpoints, the subject-matter and the form. The material used in this scale is purely

narrative, but the principle can be applied to all forms. We have, therefore, in the first instance the story-value, or the descriptive value, or the expository value, or the argumentative value : then in the second place the value as form. With a careful analysis of the most common errors under such heads as Use of Capitals, Punctuation, Syntax, all the commoner errors can be compared and estimated and receive a standard negative value, so that the teacher may feel more confidence than before that his grading will remain steady, and will stand comparison with the grading of his fellows.

When we pass to drawing, we get rather a shock at being presented, by Professor Thorndike, with a sheet of fourteen sketches, each with its mark-value plainly indicated with the usual decimal accompaniments. They range from what might pass for a cell under the microscope, but is marked as quite worthless, up to a very effective head in shade. As the specimens have been arranged according to the judgment of " about 400 artists, teachers of drawing, and men expert in education in general," we must accept them as they stand. It appears, however, that Dr. Thorndike, with his usual clear judgment, is quite aware of the limits within which his artistic colleagues can be depended upon. He says : " If the same judge should so rate a thousand drawings, and then, putting these ratings aside, rate the thousand over again, he would vary often by more than half a ' merit ' from his previous judgments." What, however, gives value to the scale, and will please practical teachers, is the fact that it stood an actual test.

" Ten teachers measured the merit of a drawing by the use of the scale, and varied only 4 points all told. Ten other teachers measured the merits of the same drawing without the scale. They were instructed to grade the drawings from 0 to 17. They showed a variation of 14 points, or nearly four times as much variation without the scale as with it." [1]

This system of testing has spread to practically all the subjects of the school curriculum, though it can hardly be said that actual scales are in existence. Yet we find *A Scale for Measuring Ability of Children in Geography in Grades* 4, 5, 6, 7, 8, called the Hahn Lackey Scale. It consists mainly of questions and problems, and as these bear largely on the informational side of the subject, they are not so valuable as they would be if they contrived to get closer to what specialists are fond of calling the geographical sense.

The correlation of the scales with the age of the pupils, naturally leads to the establishment of certain age standards corresponding to what we found in the intelligence tests. Indeed, the new American scales appear to have crystallised out an idea that was implicit in the attitude our own school inspectors felt bound to take up with regard to the more or less standardised tests that they carried about with them throughout the country. They were hovering on the brink of discovering or inventing—which you will—the " norm " that is now cutting such a pretty figure in American and even British educational discussions.[2] This term

[1] Wilson and Hoke, *How to Measure*, p. 184.

[2] In point of fact, several of my inspector friends during the 'eighties relieved the monotony of their journeys

indicates what wide investigation proves to be, in a given subject, the attainment characteristic of a given age. One of the best examples is to be found in the Ayres Spelling Table, where we have the words so arranged that the percentage of errors in each of the groups is so worked out as to give the norm for each grade or age that is tested by the group. So with the Courtis scales of arithmetic and the various writing scales: growing experience is making it increasingly possible to establish norms that may be used with confidence. In fact, we are gradually approaching a position in which a teacher in an isolated school may be able to test his pupils in such a way as to put them into the same balances as their more fortunate coevals in populous centres. We are only approaching: we are far from having attained. So we need not yet hoist danger-signals to warn against the temptations of adopting a too mechanical or mathematical view of the standing of our pupils. In the meantime, our approach to accuracy in measuring the products of our school-work is something to rejoice over. The difficulties yet to be faced will, no doubt, be sufficient to brace us against the snares of an insidious simplicity that might blind us to the dangers of neglecting wholesome human idiosyncrasies. We must never lose the individual in the type; but the type has a high value as an aid to the understanding of the individual.

by calculations, that resulted in what were practically norms in arithmetic for their districts.

CHAPTER V

THE PSYCHOLOGY OF THE CLASS

THERE are three terms that are always getting in each other's way in the study of educational questions: *individuality*, *personality*, and *character*. The last may be conveniently marked off from the other two, because it generally carries with it the idea of moral evaluation. When we refer to a man's character, we almost invariably have in the background some sort of estimate of his moral standing. Individuality has a corresponding limitation on the biological side. No doubt the schoolmen spent some centuries in failing to discover the exact nature of individuation, but the biologist has no difficulty, in most cases, in saying precisely what an individual is. For him it is a separate organism existing independently as a self-sufficient unity. To be sure, there are certain borderland cases, notably among the polyzoa, but in the higher ranges of animal life, which alone interest us here, there is no room for doubt. When applied to human beings, however, the term *individuality* carries with it something more than the biological meaning. It is quite common to make an appeal to teachers to respect the individuality of their pupils; but in this sense the word *personality* would do as well, and in fact

is, on the whole, more frequently used. What we must respect in our pupils is not the mere separate existence of the young human animal, but those qualities in him that make him what he is. One is tempted, indeed, to regard personality as the picturesque aspect of individuality. Teachers have to admit that the most commonplace member of their classes has individuality, since he is obviously a self-contained unity existing by and for himself. But they do not feel at all tempted to speak of his individuality in this sense: it is taken for granted in the same way as the individuality of the desk at which he sits. No doubt we have to take account of the individual qualities of our pupil, however commonplace these may be. He enjoys his banal self-containedness quite as much as his brilliant fellow enjoys his striking personality; but the two belong to different categories all the same.

Of practical importance to the teacher is the fact, which careful observation of the use of the term will establish, that the term *personality* nearly always implies a reference to the way in which the individual concerned reacts upon other individuals. A man of strong personality is one who has a marked influence upon his fellows. Indeed, the amount of personality attributed to any individual may be not unfairly estimated by the degree of influence he can exert upon others. If a quantitative scale of personality is desired, this test might well be adopted to establish a standard.

The derivation of the term *personality* perhaps gives a little help in getting at the root meaning. In the old Greek and Roman theatres it was much

more easy to duplicate parts than on the modern stage, where so many characters are included in the cast. Since it was the custom to have not more than three chief actors on the stage at one time, it was comparatively easy for one actor to play more than one part. In order, however, to prevent confusion in the minds of the spectators, it was necessary that at each entrance the actor should have some distinctive mark to indicate the particular rôle he was at the moment playing. A mask was the simplest device to remove all doubt. Since he was wearing a mask at any rate, it was found desirable to turn it to a second use in order to supply another imperative need. With the huge audiences that filled the ancient open-air theatres, it was exceedingly difficult for even a strong human voice to reach all parts of the amphitheatre. Accordingly, the mouth of the mask was so contrived as to act as a megaphone. Which was the primary and more important function of the mask, let the critics decide. The picturesque derivation of the Latin word for a mask, *persona*, is said to be *per* and *sonare*. This would seem to show that the megaphone aspect was the more important, but for the purposes of psychology the essential point is the character that the actor was personating at the time. Obviously, one of the most direct ways of estimating the importance of a particular *dramatis persona* was the way in which he impressed the audience, thus bringing out the fundamental connection between personality and social intercourse.

Another illustration of this connection is to be found in the grammatical use of the term *person*.

The first, second, and third persons, representing respectively the speaker, the hearer, and the subject of discourse, give a clear indication that personality is closely related to social intercourse. The *I* demands at least a *thou*, even if we could altogether dispense with *he*, *she*, *it*, *they*, and *them*. The interaction that goes on among the personal pronouns is symbolical of the interaction that goes on among persons in their social relations. The ego cannot exist by and for itself alone. In order to realise itself, there must be some other person or persons upon whom it may react. An *ego* implies an *alter*. No doubt we can think about and analyse the ego by itself. We can isolate it and reason about it. But it cannot become a living, organic entity unless it has other egos upon whom to act. This is a rather vague and abstract way of saying that the individual can realise himself only in a society. We must pass from the purely individual psychology of the old writers of the school of Locke, Reid, Stewart, and Hamilton, to the collective psychology of Bagehot, Tarde, Le Bon, Macdougall, and Trotter.

Our first business is to realise that the individual *ego* changes according to the *alter* upon whom it reacts. In the course of a day, the ego has, indeed, many parts to play. The boy of fourteen is quite a different person according as he is dealing with his brother of eighteen, his sister of ten, his brother of twelve, his father, his mother, his schoolmaster. It is not that he is playing a part in the bad sense of that term. He may be able to pass with credit the Polonian test of being to his own self true ; and yet he plays Proteus all the while. Without losing

his own essential qualities, he is continually changing to meet the needs of the social environment: he is but a unit in the problem of social psychology. Yet he is not an absolutely independent unit. His position may be compared with that of the atom in chemistry, as that science was understood in the pre-radium day. We used to be told that the atom was the ultimate and irreducible unit of the chemical elements, but that it could not exist entirely alone. Combinations of atoms of different elements made up what we were taught to call molecules, and it gave the schoolboy solid satisfaction to learn that a molecule of water was made up of two atoms of hydrogen and one atom of oxygen, and that the atoms were quite satisfied with this arrangement. He could not, however, make up his mind to approve of the suggestion that an atom of free hydrogen could not lead a satisfactory life by itself, but must join with some other atom, even if that other atom were also hydrogen. The teacher had to drill into the schoolboy mind that the essential point was that atoms could not exist in isolation: they had to seek other atoms in order to form molecules: molecules were the only stable forms in which atoms could be at peace. The student of psychology has apparently to learn the same lesson. The egos cannot exist by themselves; they must form groups corresponding to molecules.

We have no recognised word in psychology to correspond to molecule in chemistry. Professor J. M. Baldwin has appropriated the Latin word *socius*, and has given it a very special signification

to suit his private ends. But there is nothing to hinder us taking the term and making it mean what we find more useful for our purpose. With apologies to Professor Baldwin, we shall regard the *socius* as the social molecule, made up in the first instance by a combination of the *ego* and the *alter*. It is true that the *ego* is continually changing its *alter*, so that the social molecule is in a continual state of flux. In the world of selves, each *ego* is continually changing its mate, but always remains part of a *socius*. This state of continuous change in no way disturbs the chemical metaphor. The state of affairs described is, after all, only a very tame, slow, and sober parallel to the dance of atoms to which imaginative chemists have accustomed us.

Coming now to practical examples of this social chemistry, we have to consider in unfigurative language the interactions of individuals upon one another in a social environment. It is a matter of common experience that in ordinary life people behave differently according as they have one or many people to deal with at a time. It is perhaps not a scientific, but it certainly is a useful, classification of human beings into those who are at their best *à deux*, and those who do not shine unless they have a chance of disporting themselves at least *à trois*. The presence of a third party often appears to change entirely the social reactions of an individual. A child who is quiet and well behaved when in the company of a sympathetic but undemonstrative uncle, often becomes rude and troublesome the moment a third person appears, before whom he

may assert himself. Playing to the gallery begins very early in human development, certainly before the actor leaves his nurse's arms.

The socius may be accepted as the social unit, but complexes are soon formed, and the question rises whether a new principle is involved in the wider grouping of the molecules. It is generally recognised that human beings in groups behave differently from what they would do as individuals. Collective psychology maintains that there is a collective spirit, whatever may be the final decision about the *separate* semi-independent existence of a "group mind." This attitude is to be expected as the natural consequence of what has been just said about the social molecules. But a question now arises, How many social units are required to produce this collective feeling? A mathematician is apt to answer bluntly, Anything more than one, and there is some justification for the uncompromising statement. But a little investigation at the lower levels will indicate that the solution of the problem is not so simple as all that. Those who have made a study of the principles of organising walking tours have seriously debated the advantages of two, three, and four. *Two* has many obvious advantages if proper provision is made for a period of separation every day of the tour. *Three* is defended on the ground that this number provides for the temporary splitting up into the $2 + 1$ combination, by which A can rest himself for a while from B by joining himself to C, and the others in the same way. The trouble here is the danger of the $2 + 1$ combination becoming too pronounced, leading to a permanent

exclusion of one of the three from any real organic connection with the other two. *Four* is found to be a dangerous number from the strong tendency to break up into two pairs. The problem of the proper number of guests at a dinner-table goes on similar lines. Many hostesses have a strong preference for six, others prefer eight. Something depends upon the shape of the table, but more upon the nature of the conversation desired. The table may be taken as the unit, and in that case the guests will be expected to keep to the same subject of conversation, and to avoid splitting up into conversational groups. A famous dining club in London made it a strict rule that the conversation should thus remain a unit. The implication of this rule is that the diners were to be regarded as making up a collective psychological unit.

For it must be noted that a mere gathering of individuals does not necessarily form a psychological unit. At Charing Cross Station on a Bank Holiday there are gathered together some thousands of people; but they have all their own individual interests. Each is seeking out his own particular ticket office, his own particular platform, his own particular train, and his own particular corner seat, and pays no attention to other people, beyond getting out of their way. This is a mere assemblage of individuals. If, however, something out of the common should occur, something of general interest, such as the falling of a girder from the roof, the mass of people becomes inspired with a common interest, perhaps with a common purpose, and we have a psychological unit. Something new has come into

the situation. The number of people has not altered, nor has the inherent nature of the individuals intrinsically changed, but the crowd, as a whole, will now behave in quite a different way from what it did before.

We are not to make the mistake that we can get at the nature of the change by a process of arithmetic. It is not a matter of getting the average of the individuals involved. The crowd spirit is something quite new, and cannot be reached by any process of calculation. To illustrate, we may fall back upon a familiar distinction that most teachers have occasion at some time or other to instil into the minds of their pupils: that between a mechanical mixture and a chemical compound. We tell them that if we take a pile of salt, a pile of sugar, a pile of pepper, and a pile of sand, and mix them all together as thoroughly as we can, we have a mechanical mixture of a dirty brown colour. But none of the constituents is necessarily changed, and if we had plenty of patience and time—or, failing these, the loan of a fairy godmother—we might separate out the materials into the four original heaps of salt, sugar, pepper, and sand—and nobody would be a bit the wiser. On the other hand, if we take a colourless gas and a silvery metallic fluid and put them into chemical combination, we do not get a silvery gas or a colourless fluid, but a bright scarlet powder, that bears no resemblance whatever to the materials out of which it is compounded. So with the psychological crowd: it acts in a way that appears to have no causal relation to the elements of which it is made up. People in the mass, when

they have been worked up into a collective psychological unit, act in a way that would greatly surprise the individual members of the crowd in their normal condition. On a Mafeking night steady, responsible and normally respectable dull men will jump upon desks and throw their silk hats into the air without caring whether they recover them or not, in a way that would never occur to them to do if they were alone.

Though collective psychology is now being studied intensively, it must not be supposed that this crowd or herd instinct is any new discovery. No doubt the oldest primitive hunters were familiar with the peculiar activities of herds of wild cattle under certain stimuli. The study of the conduct of crowds was surely not neglected by the Egyptian priests and the wise men of other nations who depended for their power on the knowledge of human activities and weaknesses. Even in the educational world the crowd spirit is not a discovery of yesterday. David Stow, in his training system, made great use of what was then called the Sympathy of Numbers. The teachers of eighty years ago were familiar with the phenomena of collective action, though they were far from being able to supply any explanation of how they were caused. It is something to have a grip of the facts of the case, even if we have to leave, as David Stow had to do, the explanation to our successors.

In point of fact, we have not made any very great progress in this matter, even at the present day; but we at least realise that there is a problem, and that methods must be sought to deal with it. Though

the credit for working up the psychology of collective action is generally given to continental investigators, it is pleasant to note that the seminal ideas came from an Englishman. The monumental work of Gabriel Tarde, *Les Lois de l'Imitation*, was preceded by Walter Bagehot's *Physics and Politics*, in which he attempts to apply to social reactions the same principles as are usually applied to physics. Naturally, he was not very successful on the purely mathematical side, but he did admirably suggestive work that opened out new lines of investigation that have led to very important developments. His position was a little like that of Herbart in pure psychology. This German psychologist maintained that the mental processes are carried on in such a regular and systematic way that the interaction of ideas, under proper conditions of investigation, should be as easily worked out as a rule-of-three problem. We have not yet reached the stage threatened by Titchener, when in the future a book of psychology will be as full of formulæ as a book of physics is at present. All the same, we have reached a few general principles that may be usefully applied to the advancement of our knowledge of crowd action.

As suggested by the title of Monsieur G. Tarde's book, the force known as imitation counts for a great deal in all collective reactions among animals and human beings. Imitation naturally works in two ways—wittingly and unwittingly. The way in which we learn to speak is largely imitative. The child does not at first wittingly imitate, and even when witting imitation comes, the child does

not know *how* he imitates. If a man imitates a peculiar sound that he hears, he does not in the least know how he produces the effect. If the matter is so obscure even at the witting or deliberate stage, how mysterious must it be at the unwitting or merely organic stage!

Further, we are not to limit imitation to the physical stage. We imitate states of mind as well as movements of the body. What is vaguely called sympathy is really the mental or spiritual side of imitation. The derivation of the word itself suggests this. A feeling along with, a putting of ourselves in the place of another, is clearly a case of imitation, usually in the unwitting form. We do not ordinarily say to ourselves: Go to, let us put ourselves in the same attitude of spirit as this person. We should be misled by the restricted meaning of the word in our English language. It must not be confined to fellow-feeling in suffering. It is equally applicable to joy. The German language has here an advantage over ours. It has three words where we are content with one. *Mitgefühl* is the general term meaning feeling along with another; *Mitleid* means the sharing of grief; while *Mitfreude* provides for the case of sharing joy. There is no doubt that sympathy, in its various forms, is contagious or infectious—it is a little difficult to determine which is the proper term here. There are, no doubt, people who are relatively unsympathetic, just as there are people who are immune to certain physical affections. But the great mass of humanity is as open to suggestion in relation to sympathy as they are in relation to the more physical aspects of imitation. Indeed,

it is doubtful whether we are able to separate quite clearly the physical from the spiritual in these matters. All that lies behind the Lange-James-Sutherland theory may be called in evidence in support of the probability that the demonstrably infectious physical imitation is essentially the same as the more spiritual sympathy.

In any case, mob action, with its imitative and sympathetic bases, exemplifies a falling back upon the primitive elements in man. An excited crowd is really a collective embodiment of our primitive ancestors. All the refinements of modern civilisation seem to fall away from the individuals who form what is usually called a mob, and the same is true, in varying degrees, of whatever collective units we study. The titans within us seem to make common cause and to dominate the situation. The mystery of the unconscious in the individual becomes intensified in the case of the collective unit. For in the individual case there is a unifying force in the consciousness, though that force is in abeyance when the unconscious takes things into its own hands. But in the collective unit there has never been a unifying force, or, at any rate, the existence of such a unifying force has not been demonstrated. As the individual has developed out of the stage at which everything was carried on in the realm of the unconscious, so the collective unit may be still in the purely unconscious stage, waiting for the evolution of a collective consciousness that may appear at a later stage of social development.

In the meantime we must depend upon a more or less superficial examination of external symptoms

in our analysis of the interaction among individuals that gives rise to collective activity. If it be true that the mark of crowd activity is a reversion towards the primitive, it would seem that it should be much more difficult to rouse the crowd spirit in a group of highly cultured people than in one made up of less sophisticated folk; and this appears to be true so far as the *beginnings* of collective action are concerned, though when once the crowd spirit has been aroused it may go to any length even among the most cultured people. There seems to be enough truth in Kipling's "The colonel's lady and Judith O'Grady are sisters under the skin," to justify this view of crowd action, as, at any rate, a working hypothesis.

What, then, is the process by which the crowd works itself up to the proper pitch to throw off restraints and revert to the primitive? Two forces appear to be at work—fusion and arrest. All the common elements in the individuals that make up a crowd tend to fuse together and thus to acquire strength. On the other hand, qualities that are peculiar to individuals, or are shared by comparatively small groups of individuals, are not only swamped by the big imperious combination of common elements, but actually tend to counteract each other's activities and thus to produce arrest. The common qualities not only excel in native power, but they are enormously greater in number. If a plain man of some intelligence cares to take two sheets of paper and to write out on one of them the qualities in which he resembles William Shakespeare, and on another the qualities in which he differs from

him, the result will be an enormous preponderance of points of resemblance. The number of qualities in which the plain man resembles Shakespeare is almost infinitely greater than the number of qualities in which he differs. It is true that the differentiating points are rather important; but, after all, quantitatively there you are. Accordingly, in a crowd the number of differences is but small compared with the compact mass of agreements.

It may be said that all this applies only to the grosser elements, and that when it comes to be a matter of intelligence the laws of fusion and arrest do not apply. To illustrate this point, the jury has been taken as a typical case. In his *Psychologie des Foules* M. Gustave le Bon tells us that in France at various periods, notably before 1848, the administration made a point of selecting for jury service members of the educated classes—schoolmasters, civil servants, men of letters—but to-day they are content with small shopkeepers, the heads of small businesses, general employees, since "statistics prove that the decisions of the two groups have been identical." One of the most distinguished advocates at the Paris *cour d'assises*, M. Lachaud, began by rejecting, when he had a weak case, from the proposed jurymen all "the intelligent individuals," but experience afterwards taught him the utter futility of this process of rejection, since the verdicts remained the same, whether he made his rejections or just took the jurymen as they came.

But this illustration is not quite to the point, for a jury's duty does not depend upon the exercise of a specially fine intellect, but rather upon the

normal use of the universal of thought. Locke believed that no two honest men could come to different conclusions if the same matter were put before them. Those whose experience shows them the daily spectacle of political and other opponents taking diametrically different decisions from the same presented material, may smile at this as a temporary falling from grace of an otherwise eminently sensible Englishman. But Locke lays down certain conditions without which his generalisation will not hold. These are : (i) All the conditions of the case must be known to both. This naturally does not demand that each of the men must know all the facts with their implications. This would involve a knowledge of the whole universe. It is enough if both of the men know exactly the same things. (ii) They must be free from prejudice. (iii) They must give their mind to the subject. Most fair-minded men will agree that Locke is right in his contention, but will add that his three conditions can never be perfectly fulfilled. Yet in a well-conducted law court we approximate to Locke's conditions. It is the business of the judge to see that all the terms are properly understood. The prosecutor and the advocate for the defence have the duty of presenting all the facts. The jury have been specifically selected from those who have no personal bias in the case. The judge does his best to keep them up to a fair standard of concentration on the subject in hand. But, after all, the decision the jury are called upon to make is merely what is technically known in logic as a judgment—that is, the decision whether one term agrees or does not

agree with another. In the logical process of judgment, the most brilliant intellect and the best stored mind has no advantage over the mind of any plain man who can claim the modest honour of being *compos mentis*. It is when the process of giving a verdict has been reduced to this lowest common denominator of thought that collective psychology ceases to operate. No doubt in real life verdicts are not always obtained on this highly technical plane. Human nature asserts itself in the jury-box as elsewhere. But it is useful for teachers to consider this extreme case and learn from it.

What we are accustomed to call a class is obviously a collective unit, a sort of crowd. Among the various kinds of crowds included in the psychologists' classification, the class ranks among the homogeneous but not anonymous variety. It is, indeed, one of the best examples of homogeneity. The pupils are of approximately the same age, belong to the same grade of society, have the same traditions, the same religion, the same attitude towards sport, and in particular have pretty much the same mental content so far as the class work is concerned, for their place in that particular class has been selected for them because of their attainments in the subject being taught. As to the non-anonymity, this distinction is introduced to mark off the class from a crowd where the individuals are not in any way identified. So long as a class is being taught as a class, there is no need to refer to the individuality of any special member. But the very fact that every pupil knows that he is personally known to the master and to his fellows, makes the

grouping different from that assembled to enjoy, say, a kinematograph entertainment. Such an audience is sometimes fairly homogeneous, but its general mode of action is quite different from that of a non-anonymous class.

We have been taking it for granted that the class is a psychological unit, but it does not follow that it is a psychological unit all the time. So long as the class is working as a whole, as, for example, in listening to an exposition by the teacher, or following a demonstration on the blackboard, it forms a psychological unit, even though some of the pupils may not be really attending. But when the teacher sets the pupils to work out a series of exercises, or to prepare some memory work, the class ceases to be a psychological unit, and becomes a mere group of persons each attending to his own business. This integration and disintegration is going on all day long, the teacher being usually quite aware of the alternation. But sometimes disintegration occurs without the teacher willing it: sometimes, indeed, without his being conscious of it. In its more virulent forms, this cannot take place, except in the case of a thoroughly bad disciplinarian. But a modified form of disintegration may take place against the teacher's will, and without his being fully aware of the change. Most teachers are very sensitive to such a change. Lecturers and preachers of good quality know at once when they have "lost grip of their audience," and most of them have acquired, from experience, skill in recapturing the lost collective spirit. Often the disintegration arises from wandering attention on the part of the teacher

himself, and the class can be pulled together by a resumption of the more vigorous style that marks the earnest teacher. Occasionally, the falling off results from physical conditions which the teacher has sometimes the power of modifying, and sometimes not. Quite commonly, the cause is boredom as opposed to fatigue. This, again, is not difficult to deal with by a capable teacher—the introduction of an interesting illustration, or a temporary change of subject, is usually sufficient to meet the case. The essential point for the teacher is to realise that an alternation between integration and disintegration is essential to the wholesome working of the class as a psychological unit.

A disturbing influence in the manipulation of a class as a psychological unit is found in the class-leader. Writers on the subject illustrate this influence by referring to the leaders of the herd among animals. The existence of such leaders cannot be denied. Even the plain man cannot observe a flock of sheep or a herd of cattle without seeing the herd-leader at his work. Physical strength, a fine figure, and the resulting power of taking suitable action may explain the status of a herd-leader, but in a class there is something more subtle. Without doubt, physical strength and beauty have their value in establishing leadership in a class. But there are other and less patent qualities. No real explanation is supplied by speaking of prestige, which, after all, is merely a word to indicate that the person in question has established himself in a position of prominence. Note that *prominence* is exactly the word wanted

here. It does not involve anything particularly noble, but merely something that distinguishes an individual from the rest of the herd. Unlike most other words, this term *prestige* appears to have taken a turn upwards instead of downwards. It originally was related to conjuring and other striking ways of producing an effect upon onlookers, but in the way words have, this particular mode of attracting attention became associated with other and, in this case, more dignified ways, with the result that prestige has now acquired a more respectable connotation, though in some directions it is still used with a shade of doubtful estimation.

In any case, the leaders of a class must possess prestige in some form or other. Personal qualities are of the first importance, particularly in social connections. But there are some types of personality that prefer to act from the background and through other persons. Men fall, in fact, into two classes with regard to the possession and the exercise of power. Much the bigger class is made up of those who desire to have both power and the appearance of power, but among these are included those who are content if they have the appearance of power to a sufficient degree to impress people in general. The essential characteristic of the group is the desire to have the appearance of power, whatever may happen to the reality. The smaller group is made up of those who are content to have the real power, and do not trouble themselves about who has the appearance of exercising it. People like Francis Place, working for the Reform Bill in his tailor's shop at Charing Cross,

belong to this group, and in many school classes there will be found to be two leaders, one the ostensible leader, belonging to the first group, the other the real leader, belonging to the second. Very often the first leader is of motor temperament, an extrovert, while the second is a sensory, an introvert.

It is, of course, obvious that the teacher who wishes to control his class in the most efficient way must take account of class-leaders, and use them wisely for the good of the class as a whole. His own position is naturally a little ambiguous. In a certain sense, he is the ultimate leader of the class himself. But there is a difference between his leadership and that exercised by members of the class. A class-leader proper is not only in the class, but of the class. He must form a part of it, must enter into its collective feeling, and respond himself to the stimuli that move his fellows. No doubt in actual experience it is sometimes found that class-leaders separate themselves from this oneship with their fellows, and become more or less external class-leaders. In such cases, they are really usurping the teacher's place. A mob leader who stands sufficiently outside of the mob to use that mob for his own ends, is no longer the natural leader of that mob, but an outside personality who makes use of the mob as an instrument. The distinction is quite a clear one and has practical importance. But it must not be supposed that there is anything radically wrong with a member of a class taking up the position of an external force. The only important point is that we must realise

the nature of this attitude so as to meet the new situation that it creates. A member of the class who separates himself from his fellows must be dealt with by the teacher on the plane of external equality, though absolute equality may be reasonably denied. For example, the official position given to prefects marks them off from what may be called the natural leaders of the class. They have a recognised constitutional authority which naturally increases the prestige they originally enjoyed in some measure, else they would not have been chosen as prefects.

The manipulation of natural class-leaders is different from that of those officially recognised. In the second case, the relation is openly recognised: the prefect is frankly acknowledged to be a sort of representative of authority. He is on the side of law and order, and is to be relied upon in a case of difference of opinion between the master and the class to take the side of the master in the last resort, though, of course, he has a loyalty to his class-mates, and will be expected to uphold their point of view unless in so far as his seniors can show him good reason against it. This was the kind of leadership that the young Richard II offered to the mob when their natural leader, Wat Tyler, was struck down, but he did not realise that, in the nature of things, he could not hope to represent both parties in the social strife. In school there is the fundamental proviso that the masters exist primarily and indeed absolutely for nothing but the good of the pupils. No doubt the ordinary schoolboy feels pretty much towards his masters

as the mob did towards the king. It is well, therefore, to encourage the custom of allowing forms to elect their own prefects, even though it may be necessary to reserve for the masters the right of veto in case of any really dangerous election.

CHAPTER VI

THE KNELL OF CLASS-TEACHING

ONE of the most notable features of present-day education is the reaction against class-teaching. The class has, in the past, been largely taken for granted, and its very existence tended to guide teaching method into certain definite lines. Many modern teachers are dissatisfied with the limitations thus imposed on their freedom, and are in revolt against the whole system. The wish being father to the thought, there is a rumour that the knell of class-teaching has been rung. The question, Who tolled the bell? produces various answers. There is quite a demand for the honour, but, on the whole, the evidence seems to point to Dr. Montessori. Whoever is entitled to the honour must bear the reproach of a somewhat unseemly haste. It cannot be denied that certain preparations are amaking for the obsequies; but though the patient is in a bad way, the corpse is hardly yet available for sextonly treatment. Indeed, the death, if inevitable, is likely to be a lingering one. We have plenty of time to arrange about our mourning.

To begin with, we must clearly distinguish between the class and class-teaching. We see no danger of the class itself disappearing. It is a vigorous

institution, enjoying robust health: it has solid foundations in economic principles. The world cannot afford to dispense with it. The education of the individual is, no doubt, the ultimate purpose of any national system, but no state can afford to train its citizens on the plan of private tuition. This would mean a life for a life: each generation would have to sacrifice most of its activity to the preparation of the next. The whole nation would have to become private tutors—which is absurd. In the past, princes and wealthy people could afford to buy the whole time of certain capable persons for the purpose of educating sons and daughters. For a little while longer, this plan may still be tolerated, but the great mass of society cannot afford anything but collective instruction and training, even if it could be demonstrated that class-work is, in all ways, inferior to individual teaching, which has certainly not yet been done. In national education the class is an inevitable institution. It has its roots deep in the past, and there is no sign that economic conditions are likely to warrant its disappearance in the future. But it does not follow that it will, for all time, fulfil just its present function. Those who are waiting in vain for a funeral may perhaps console themselves with a transformation.

For we may regard the class from two different standpoints. It may be treated as a unit of teaching, or as a unit of organisation. It is as a teaching-unit that it is most usually regarded, and in this direction lies its danger. It is in this aspect that it is so generally challenged to-day. As an organisation-

unit it is much more securely entrenched. Even the Montessorians recognise the necessity for some unit of organisation, and we may as well call that unit a class as speak of it by any other name. The question was once put to Dr. Montessori: How many pupils can a Montessorian teach? I cannot remember the exact words of the answer as given in the typewritten report that it was my privilege to read, but the substance is clear in my mind. To begin with, there was the inevitable correction of the terms in which the question was put. The Montessorians do not teach, they merely guide. We must not speak of Montessorian teachers, but of Montessorian directresses. Answering, however, the spirit of the question if not quite the letter, Dr. Montessori let it be understood that, with the aid of a young attendant to look after the mere bodily needs of the children, a Montessorian directress might be reasonably held responsible for the activities of forty-five children. I was surprised at the time at the large number, for I had supposed that the Montessorians would demand the small classes that the kindergartners regard as essential; and I was rebuked by a distinguished Montessorian for being surprised. I ought to have realised, I was told, that there are no such things as classes in the Montessorian system: that the founder had abolished them: that the class was no more.

Naturally, I am totally unrepentant. How can I be otherwise, when I find myself surrounded every day with classes that have all the symptoms of almost excessive vitality? Yet my critic had right on her side to this extent, that, so far as the Mon-

tessorians are concerned, the class as a teaching-unit is dead, and that the disease that brought about its death is spreading into all manner of other classes throughout our country. On the other hand, the protest of the Montessorians against the class as a teaching-unit is an admission of the need for it as a unit of organisation. It is only when it is regarded as a teaching-unit that the Montessorians become definitely hostile. They hold that the individual child is the unit, though it may be desirable for economic, and perhaps even for other, reasons, to group the children in what may be called a class. The individuality of the children must be allowed free play, and this cannot be done if they are taught as that collective unit that is commonly indicated by the term *class*. For, in Samuel Butler's words:

> " . . . when they're cast into a lump,
> Their talents equally must jump."

Now, practical experience shows teachers that it is impossible to attain this equal jumping, so there always has been a trend towards conditions that will make it possible for the pupils to be treated as individuals rather than as mere elements in a collective unit. Sometimes a fairly satisfactory solution of the difficulty was forced upon teachers by what appeared to be adverse circumstances. This occurred, for example, in some of the old Scottish parish schools where there was but one schoolmaster to a whole roomful of children, and each came up in his turn to have his work examined and a new lesson set. Regarded by many as a mere makeshift to do the best under intolerably bad

conditions, the plan was found to work exceedingly well. The school was merely a unit of organisation, and the teaching was individual.

But the value of individual instruction under class organisation was not left to be discovered by sheer force of circumstances. Practical teachers and intelligent educationists reached the conclusion that the individual must become the real unit of teaching, though, for economic reasons, the class could not be comfortably abolished. Thus, under the title of *The Laboratory Method*, E. J. Swift, in his *The Mind in the Making* (1908), describes a scheme that brings out all the essentials of what we shall consider later under the name of the Dalton Plan. Further, my colleague in the University of London, Professor T. P. Nunn, has made it a fundamental part of his philosophy of education that the individual is the basis of everything. The theoretical aspects are fully developed in his *Education: its Data and First Principles*, and the practical applications were made in public lectures delivered by Professor Nunn very early in the present century which embody all the essentials of the present-day plans.

But the most common way of trying to combine the individual method with the collective has been to secure very small classes, so that the teacher may have time to deal with each pupil as a separate person, which is only another way of saying that the teachers obviously wanted to treat the class as, in reality, a unit of organisation rather than of teaching.

This consideration of the number of pupils that

may be effectively dealt with in a class naturally raises the fundamental question of the intrinsic value of class-teaching as such. Both the Montessorians who reject the collective unit of teaching altogether, and the teachers who try to deal with the class as an organisation-unit, while ostensibly working with it as a teaching-unit, really beg the question of the value of collective teaching. They take it for granted that collective teaching is bad as such. But under proper conditions collective teaching has not only no evil effects, but certain definite advantages. For some subjects a fairly large class, so far from being a definite disadvantage, is a clear gain. Wherever subjects demand inspirational treatment, there is no special benefit in limiting the class to, say, twenty-five. In literature, in religious knowledge, in art appreciation and music appreciation, in certain parts of history and geography, a large class has some advantages over a small one. No one will accuse Dr. F. H. Hayward of any desire to cut down the staffs of our schools, and yet we find him actually advocating large classes for subjects where emotional elements have an important place. To be sure, he dislikes the word *class* as used in this connection, and it must be admitted that the term usually carries with it a connotation not quite appropriate to the kind of work that he has in view in his " appreciation lessons," and more particularly in his " celebrations." He has in view rather an audience than what is technically called a class, but this does not alter the fact that his audience is a teaching-unit in the sense in which we have used that term.

This recognition of a large unit for inspirational purposes does not come as something new even in ordinary elementary schools. Eighty years ago, in his school in the Cowcaddens at Glasgow, David Stow exploited his doctrine of the "sympathy of numbers" by establishing a steady series of what were called "gallery lessons" every day. After the fashion of schools of that time there was at the end of the big room a series of benches rising tier upon tier behind each other and technically known as "the gallery." It contained room enough for three or four classes to be massed together for a lesson of a more general character than was given to the separate classes. The subjects were not limited to religion or morals, but were always of strong human interest, and were given by teachers of very special powers. The results were in every way satisfactory, except perhaps for the gallery teachers, who were found not to last quite so long as could have been wished. Their work was specially exhausting. During every moment of their inspirational work, virtue was going out of them. This does not, of course, reduce the value of the system, though it may demand a strict rationing of the amount of such work to be demanded from any individual teacher.

It is clear from what has gone before that there is real danger of confusion resulting from the different senses in which the term *class* may be used. Not only may it mean either a teaching-unit or an organisation-unit, but it may mean a group that is being taught hard facts, or one that meets to be stimulated by contact with an impressive personality.

A good practical distinction may be drawn between those classes that must be small and those that may be expanded with advantage. Whatever classes are engaged in preparing for examinations must rank in the first group. Such classes nearly always demand a good deal of written or practical work that requires to be attended to by the teacher, and it is obvious that his range is limited. The amount of necessary "corrections" forms an excellent gauge of the workable size of a class.

In actual practice, there is a rough-and-ready standard recognised by the profession: twenty-five pupils for the secondary school and forty for the elementary are looked upon as not very far from the ideal numbers. It is true that there are those who would reverse the numbers, and claim that the bigger classes should be found in the secondary schools, where the home circumstances of the pupils are so much more favourable, and also the school conditions. There is, perhaps, some justification for the challenge, but as things stand at present there is not likely to be a change in that direction, since the more advanced work and the greater amount of corrections in the secondary school make greater demands on the teacher's energies. This applies naturally only to the higher forms: there seems no reason why there should be any difference in the size of classes in a preparatory school as compared with an elementary. If the present class system remains in vogue, it is probable that a maximum lower than forty will be fixed for elementary schools. But the chances are that the line of development will so emphasise the organisation side

that the numbers will be regulated on a quite different basis.

With regard to the actual process of teaching, it is too often taken for granted that the private coach has everything in his favour, as compared with the class-master. The teacher of one pupil can study him in the greatest detail, and learn exactly which line of approach is best for each subject or each part of a subject. Exactly the right sort of illustrations can be supplied, the exact line of error anticipated, the really appropriate vital stimulus applied: whereas in dealing with a class we must content ourselves with illustrations that can appeal to only a limited group at a time; we must use stimuli that fall flat in the case of quite a number of the individual pupils. But the class-teacher has many compensations. To begin with, there is the stimulus of collective work. The two forces of imitation and emulation supply, perhaps, the most powerful stimuli possible, and that without using them to any unwholesome extent. The very fact of having to present the same matter in different ways, in order to meet the different needs of the various types of mind in the class, involves, no doubt, a certain strain, but the result is good, for all members of the class get their benefit from it: each type of boy gets his special needs attended to once, at least, in each presentation. The dull boys, by sheer dint of the teacher's repetition in different forms, have a chance of picking up the essential point from one or other of the various approaches. Even the clever boys, who catch the teacher's meaning on the first presentation, benefit by the following presentations

by attaining to an *enriched* knowledge of what they had no difficulty in understanding as a bald principle.

While, therefore, admitting all the advantages of individual instruction, wherever that is available, the experienced class-director will, from time to time, be glad to become a collective teacher. The prevailing tendency of class-teachers is to increase the periods during which the class is disintegrated, but never to give up the power of integrating it from time to time. Even from the point of view of bare economy of time, it is highly desirable that the class should be integrated wherever a large number of pupils show that they are making the same kind of mistake. It is not quite true that a teacher is wasting his time if he answers precisely the same question put to him by several different pupils. It may well be that each of them puts it in a slightly different way; and, in any case, the value of an explanation given personally to a pupil is not infrequently greater than exactly the same explanation offered to a whole class. Often there is just the slightest peculiarity in the way in which a pupil puts his difficulty, and the skilful teacher almost unconsciously puts his answer in such a way as to fit into the peculiar angle presented. How often the teacher hears the relieved remark from a puzzled pupil, " Now that you put it that way——" Very much is to be learned by coming into direct contact with the different ways in which pupils go wrong.

All the same, the repeated integration of a class during an instruction period is an economical and stimulating influence that cannot be given up

without loss of effectiveness in teaching. There is still a place for the class as a teaching-unit, though its future status is likely to be mainly that of a unit of organisation.

Hitherto we have been working on the assumption that we have only the alternative of class-teaching and individual-teaching. But assuming that the class is still retained as the organisation-unit, it may be divided up into groups of various sizes. Class-teachers in the past did not overlook the possibilities of this method. During that distressing period when huge classes had to be taught as collective units and yet the pupils had to pass examinations as individuals, no means was overlooked by which alleviation could be obtained. The fundamental *principium divisionis* was the chance of passing the individual test at the end of the year. In this way the class fell naturally into a pair of very unequal groups, a big one of sure passes, and a small one of doubtfuls and probable failures. The teacher's interest was in inverse ratio to the size of the group. He did not trouble too much with the sure passes. They had to take their chance of picking up all that they needed while he was taking the class as a collective unit. When for individual work it was divided up into the two groups, almost all his attention was given to the doubtfuls. As the examination approached, his attention was more and more concentrated on the weaker group, and the abler pupils were kept busy working out "test-cards" the results of which were easily checked. The effects were not altogether bad for the bigger group, though for the smaller group

that absorbed the teacher's energies the same could hardly be said. The abler pupils being to a considerable extent left to themselves were able to work out their salvation in their own way. They had a sufficient dose of the "wholesome neglect" that would benefit some of our overtaught schools.

It will be seen, however, that this grouping was not really an educational one at all, but merely a trick in order that the teacher might concentrate on that group of pupils upon whom his reputation and that of the school rested; for in those days the point at issue was not what good work the school did, but how much bad work it could hide. True, some of the abler and more conscientious teachers under the old *régime* did endeavour to make a compromise between duty to their better pupils and duty to the school board that demanded a high percentage of passes. But even the very best of them could not make much of a grouping according to advancement, in a crowd of eighty or more pupils. Under more favourable conditions, it is possible to make quite a reasonable grouping, each group working along its own lines at its own stage of advancement. Mr. Norman MacMunn has worked out this idea for all it is worth. He distinguishes between the group system and the system of pairs. A class of thirty may be divided up into five groups of six each or six groups of five, or it may be split up into fifteen pairs. Mr. MacMunn seems to regard the two systems as different; in other words, there appears to be something intrinsically different between the pair as a unit and the group of three, four, or five as a unit. We do not

yet know enough about the psychology of the group to be able to speak dogmatically on this subject, but it does look as if there is something in Mr. MacMunn's claim. It will be remembered that the Jesuits had a habit of dividing up their classes in this pairwise fashion, but their motive was different. They set up a series of rivals, *æmuli*, who were encouraged to keep an eye on each other and show up each other's faults, and in this way stimulate each other to better things. Mr. MacMunn's pairs are partners, not competitors. This notion of partnership is extended also to the larger groups, and is in fact the contribution that he makes to the newer developments of class-teaching. His scheme of differential partnership introduces a principle that provides stepping-stones to the Dalton Plan or supplies an alternative to it.

It will be argued, as usual, that this plan of mutual instruction is no new thing, and was fully worked out on the monitorial system. But the new scheme is a real advance on the old. It does not attempt the impossible. There is no wild claim that one master, by delegation of his functions, can teach as many pupils as can be brought together in one place. Mr. MacMunn knows too well the range of the influence of one master, and realises just how far he can be diluted without the class suffering. He does not want his differential partnership to increase the size of the class under a single teacher. His plan is to get the most possible out of that teacher, while increasing the amount of positive independent work done by each pupil. Everything must be done to allow the individual

pupil to take an active part during the whole lesson period. Like Dr. Montessori he has great faith in the pupil's love of work, and regards it as a profound blunder for teachers to believe that pupils love slacking. If they do not face their school-work properly, it is all the schoolmaster's fault :

" The schoolmaster has innocently spent thousands of years in teaching children to loaf when they wanted to work. All they asked for was work in activity. The schoolmaster replied: ' You must work in passivity or not at all. What you call work in activity I call play. And as I know everything, it *is* play. And if you play you shall be punished.' " [1]

Under the ordinary class-teaching conditions, the pupil's share in the conversation is strictly limited. Few teachers realise how much of a lesson hour they monopolise in their own talking. When actual records have been kept of the relative amounts of talking done by teacher and pupils during a class hour, the teachers flatly declined to believe the evidence of those who had stop-watched their speech. When it comes to a subject like modern languages, where a certain amount of practice in speaking is of the essence of the bargain, the loss of speaking-time under the ordinary class system is immense. Mr. MacMunn supposes, not very hopefully, that most masters have realised that in a class of twenty pupils studying French, if the master speaks for half an hour, explaining and asking questions, " a boy has only a minute and a half in which to express himself." It is to remedy this

[1] *The Child's Path to Freedom*, p. 25.

deplorable state of affairs that Mr. MacMunn has produced his *Differential Partnership Books* by the use of which the class may be divided up into pairs, and thus each boy have a fair chance of activity throughout the lesson period. Part of the time each boy catechises, the rest of the time he answers, but he is active all the time. I confess to be a little anxious about the results in such a subject as French, where accent is usually allowed to subtend a very big angle, but in other subjects where results are more easily checked collectively, the scheme should and does work extremely well. This differential partnership system in fact supplies an excellent illustration of how the class-unit can be satisfactorily worked in with a smaller unit. There can be first an integration of the class with a little demonstration and general guidance, then a splitting into the groups, and finally a redintegration for purposes of correction and recapitulation.

There is one body of teachers that is not sufficiently considered in connection with this splitting up of classes. The one-teacher schools supply an excellent field for the exercise of ingenuity in dividing and combining classes. His Majesty's Inspectors of Schools, who best of all know this type of teachers, are full of admiration for the wonderful work they do under adverse conditions. Naturally we all join in this admiration, yet those who see the dangers of the class system are less surprised than some others at the excellent results gained in such schools. It must be admitted that the strain on the teachers is extreme, but the very limitations imposed by the situation lead to a

certain elasticity of interaction between teacher and pupil that is all to the good. Under such conditions an ingenious mistress has often half a dozen different systems of classification at work at once. By all the rules of the game her work should result in chaos, but instead the individual pupils make at least as much progress as they would have made had they been kept rigidly to one class in a city school. The moral is not that we should increase the number of under-staffed schools in order that children should have a greater degree of liberty at the expense of overworking the teachers, but that we should realise that here we have an unsought demonstration of the compensation accompanying a certain degree of what some tidy-minded people are apt to call neglect. The single-teacher schools are educational pioneers.

One great disadvantage of the class system of teaching is the bias it gives towards doing everything on the block system. It is remarkable, for example, how seldom class-teachers give their pupils any help regarding how to set about learning. Quite commonly the only help given is the bald instruction issued to the whole class: "For to-morrow prepare the Disjunctive Pronoun, or the Gulf Stream, or the Theory of Indices from page 210 to 213 inclusive." One boy in whom I was particularly interested will never forget his first experience in map-drawing. His master's help consisted of the simple sentence: "Draw a map of England for next Wednesday." The boy worked according to his lights. These showed him that the map in his atlas was divided up into little rectangles. He took

these to be the units of construction, and worked up his map rectangle by rectangle, producing as the result a drawing that had some at least of the qualities of a patchwork quilt. The master complained with some vehemence that he could not understand how the boy could be so stupid, and by this complaint proclaimed his own professional incompetence. It is the teacher's business to understand such things. That is what he is for.

It is not that the teacher should accept the responsibility for the actual learning done by the pupil. We cannot learn for another: yet we may be able to teach another how to learn. Here arises a certain danger of being misunderstood. There is no inconsistency in maintaining on the one hand that many teachers teach too much, and in maintaining on the other that teachers do not do enough in the way of helping their pupils to learn. The teacher who teaches too much reduces his pupil to a more or less passively receptive state. There must be activity on the pupil's part, otherwise there can be no communication of knowledge at all. The more passive the state of the pupil, the less chance of his learning. Still, it may be asked whether the teacher will mend matters much by talking about how to learn, instead of talking about the subject-matter. Teaching how to learn, however, is not entirely a matter of talking. Certain things must be explained, no doubt, by word of mouth, but learning consists mainly in the application of principles. Take such a simple matter as learning by rote a piece of poetry. How seldom does the pupil get any instruction about how to proceed!

He is told to "learn the first sixteen lines of Gray's *Elegy*," and the matter is handed over to his own resources. He can do what he pleases, so long as the lines come trippingly from his lips next morning. The teacher does not concern himself about what method the pupil has followed, or how long the preparation lasted. Now almost certainly the pupil will learn the lines quatrain by quatrain, whereas the teacher who is keeping an eye on the newer experimental methods knows that the most economical way of preparing is to learn by reading over the sixteen lines consecutively—that is, to learn the passage as a whole, and not as a group of four separate quatrains. This is a particularly good illustration as it applies to learning of all sorts.[1]

There are those who would suggest that the whole of the last paragraph should be recast in the past tense, for they maintain that the new teacher does train his pupils how to prepare their work. Professor W. C. Bagley in his *Craftsmanship in Teaching* has a chapter on "The Possibility of Training Children How to Study," in which he finds fault with the tendency of most educational books of our day to imply that teachers are doing very little to solve troublesome problems such as this. He protests that "As a matter of fact, many teachers are securing excellent results from their attempts to teach their pupils how to study."[2] What is true of

[1] It is also a particularly irritating one, as it shows the poverty of the land because we all quote it, sometimes giving it a name as "Steffens' Law." It is encouraging, however, to find that a much bigger selection of practical maxims is gradually developing in the hands of experimenters,

[2] *Op. cit.*, p. 149.

America may also be true of Britain, but the question remains: Is this attention to the teaching of how to study a general one? It is true that since learning and teaching are correlative terms, attention to the one necessarily implies the acquiring of some knowledge of the other. For example, those interested in this subject will turn with great expectations to Professor S. S. Colvin's *The Learning Process*, only to find that the matter is dealt with almost entirely from the teacher's standpoint. The book is excellent, and no teacher can read it without profit, but it is not quite the sort of thing we are here demanding.

Professor F. M. McMurry's *How to Study and Teaching How to Study* is more to the point. Here we have the subject definitely treated from our present standpoint. The author does not think it "necessary to collect proofs that young people do not learn how to study, because teachers admit the fact very generally." Indeed, he maintains that:

> "All along the line teachers condole with one another over this evil, college professors placing the blame on the instructors in the high school, and the latter passing it down to teachers in the elementary school." [1]

This, indeed, is one of the very few points "on which teachers and parents are well agreed." Further, Professor McMurry finds an additional proof of the general neglect of training pupils how to study in the scarcity of literature on the subject:

> "In the vast quantity of valuable educational literature that has been published, careful searching reveals only two

[1] *Op. cit.*, p. 6.

books in English and none in German on the 'Art of Study.' Even these two are ordinary books on teaching with an extraordinary title." [1]

This was written in 1909, and since that time a great deal has appeared on the subject, all justifying the view that the present really is a new era in education. Dr. Starch, for example, in his valuable *Educational Psychology*, has an admirable chapter on "How to Study." It is noteworthy, indeed, that nearly three-quarters of the whole book are occupied with a treatment of the psychology of learning.

It will be noticed that up to this point the reference by other writers has always been to studying, not learning. Professor McMurry falls back upon the German distinction, according to which learning is something inferior to study. Children at the elementary-school stage may be said to learn in Germany: it is only pupils of the secondary schools and universities that may be said to study. But it appears better to take the view that *to learn* is the natural correlative of *to teach*. When we truly teach, then our pupils inevitably learn. A corresponding statement cannot be made about studying. When we have learned something, we are, by the very use of the term, assumed to have mastered it. This cannot be said to be a necessary part of the connotation of the verb *to study*. No doubt we may learn a subject in a wrong way. We may have learnt something by rote, for example, and therefore have no just claim to know the matter of which we have learnt the expression: all the same, we

[1] *Op. cit.*, p. 10.

may be said to have mastered that part of our subject in our own bad way. We have at least a verbal mastery of it. But, on the other hand, if we say that we have studied a subject we do not necessarily claim to have reached any positive knowledge or skill at all. *Learning*, in fact, involves a reference to result as well as to process, whereas *studying* is confined to process. A natural objection may be raised to this interpretation of the word *learn*. If it be admitted to be the correlative of *teach*, there must be a teacher involved in all cases of learning, which would seem to stultify those who ask the otherwise unobjectionable question: Can we teach children to learn? But the problem remains, even though the need of a teacher be admitted; for in the process of learning, the pupil may be his own teacher. Indeed, progress in education may be measured by the ratio which the teacher-element bears to the pupil-element in the experience of the educand. At the early stages the external teacher-element predominates: the pupil is to a large extent passive—not, of course, in actual expenditure of energy, but as a guiding force. All real educational progress of the individual implies the quickening of the pupil's powers of not merely responding to the stimulus applied by the external teacher, but of supplying stimulus on his own account.

The advancing pupil becomes increasingly his own teacher. The success of a teacher may be fairly gauged by the degree in which he has made it possible for his pupils to do without him. The good teacher, like the good doctor, has done his best work when, so far as a given case is concerned, his occupa-

tion is gone. Teaching a pupil how to learn is teaching him how to dispense with his external teacher. It is fortunate for our self-respect, as well as for the status of our profession, that it is extremely difficult to teach young people how to learn. However skilful we may be, we need never fear that in the limited period of an ordinary school course we shall have made our services unnecessary in the case of the majority of our pupils. In all but quite exceptional cases we can foster to the utmost the self-teaching instinct in our pupils, without any danger of its acquiring such power as to be independent of our help. The nature of the help may change with the strengthening of the subjective teacher-pole in the pupil: we become more and more instruments to be used by the pupil for the purpose of favouring his learning process, but we are none the less important because our pupil is able to make a more skilful use of our help. At the earlier stages our main function should be, in fact, this very process of teaching the pupil how to learn, in order that as he progresses he may the more profitably avail himself of what we can do for him.

The whole problem of self-education is involved here. We are all familiar with the incontrovertible platitudes in favour of this form. None of us need trouble to find fault with such saws as "All true education is self-education"; "There is no education but self-education." Just as a doctor may cheerfully admit that "Nature is the best physician," and yet go his rounds without loss of self-respect, so the teacher may accept all the praise of self-

education, and yet feel that he has an honourable and most important function in the educative process. We need not here labour the distinction, important as it is in other connections, between self-education and self-instruction. For in both processes the teacher has his function, though no doubt the professional teacher feels that his special function is to be found more in relation to self-*instruction*. The self-instructed man has certain advantages as compared with the man who has been instructed entirely by another, and either against his desire or without any helpful impulse coming from within. But the man who is eager to learn and has no teacher is at a clear disadvantage compared with his compeer, who not only has the desire to learn, but has the help of a man who can save the enormous waste of energy that must take place in the case of one who cannot benefit by the experience of others, and must make his own. Given two men of the same capacity and the same desire to acquire knowledge, the one who has the help of a good teacher will make much more progress in a given time than the other who has not.

Accepting the simple definition of studying as "learning under school conditions," Dr. Starch plunges at once into an analysis of types of studying. These are three: (i) the reading type, which he believes to account for four-fifths of the work done at the elementary school, and probably two-thirds of high school and university work; (ii) the laboratory type, which includes all sorts of manipulation of apparatus, and the usual methods of observing and recording. This is the type that is getting a

somewhat new orientation, as we have seen in E. J. Swift's *The Mind in the Making*, and, as we shall see in our next chapter, in the important development of Miss Parkhurst's work; (iii) the analytical or reasoning type, in which the amount of reading is relatively small, but is very condensed. The extra energy is not expended on apparatus or external observation, but rather in reflection as in philosophy and the higher mathematics.

On the practical side, Dr. Starch got a hundred university students of all grades to write papers for him on *Difficulties and Hindrances in Studying and How to Overcome them*,[1] from which he draws certain very useful pieces of advice, certainly the most striking and useful of which is:

> "If you have difficulty in overcoming inertia, just begin to go through the motions of work . . . sit down, take hold of book, paper, pencil, or whatever may be needed, and begin to write or read or figure. . . . This will automatically start the mental process going relative to the work to be done, and before you realise it, you will be in the midst of the task, reading, thinking, and writing in an interested manner concerning the problems in hand."[2]

In an earlier book, *How to Study Effectively* (1916), G. M. Whipple gives a still more detailed series of concrete hints on the methods of study. One result of this great attention to the subject is that "how to study" has risen to the rank of a compound adjective in educational writing. It means the opposite of conventional methods that involve

[1] *Educational Psychology*, p. 180.
[2] *Ibid.*, p. 182.

no responsibility on the part of the pupils. For example, " how-to-study directions " means directions that demand effort from the pupils and throw responsibility upon them. A further development from the how-to-study attitude is what is now familiarly known as *Supervised Study*. The lead here has been taken by Professor A. L. Hall-Quest of the University of Cincinnati, who published a book under that title in 1916. The point of the new scheme is the organisation of school study in such a way as to secure independent working by the pupils without loss of the necessary guidance from the teacher. Naturally it takes different forms in different quarters, but the Hall-Quest variety divides the long lesson period (eighty or ninety minutes, but for supervised study sixty is on the whole preferred) into three portions, the first taking one-fifth and the two remaining two-fifths each. The first part is called the *review* and includes a *résumé* of previous work or a preparation for what is just coming. The second is given up to the *assignment*, during which the pupils' curiosity is roused but not satisfied, and indications are given of how the problems raised may be dealt with. The third period is devoted to silent *individual study*. There is a private arrangement of the pupils in the teacher's mind into inferior, average, and superior, but the pupils are not supposed ever to hear of this classification, though it is difficult to see how the matter can be kept secret, since the assignment of work takes a threefold form to meet the varying abilities of the pupils. However, the three grades are not regarded as permanent, and

pupils can move up or down in this private grading. The principle underlying the whole is that " the work of the school is properly to supervise and direct the individual while he teaches himself." [1]

Critics of the scheme object that it tends to produce greater dependence of the pupil upon the teacher, but its scandalised supporters hasten to explain that it acts in precisely the opposite direction —it being always understood that the teacher's directions are of the proper " how-to-study " type. The plan has been tested at various centres, and on the whole comes out well. Its main interest in this chapter is that it supplies an example of an attempt to combine the two functions of the class. It is obvious that during the first three-fifths of the lesson period the class is a teaching-unit, during the final two-fifths it is an organisation-unit. In its assignments it lays great stress on the purposive element, but on the whole does not leave enough freedom in the hands of the pupils to satisfy those who have put on the black cap and have duly passed sentence on the class as a teaching-unit. We hear almost nothing of Supervised Study on this side of the Atlantic. On the other hand, we hear a great deal about a method that began on the other side, but now seems to subtend a bigger angle here than in the country of its origin, a scheme so important that it certainly demands a chapter to itself.

[1] A. Laura McGregor, *Supervised Study in English*, p. 3.

CHAPTER VII

THE DALTON PLAN

PERHAPS the most dramatic and systematic break away from the class teaching-unit is supplied by what is widely known as the Dalton Plan, because it was first tried out in the town High School in Dalton, Massachusetts, by Miss Helen Parkhurst. It was projected in 1919 and carried out in the following year. It is sometimes called the "Laboratory School" plan, and, in a book published in 1922, Miss Evelyn Dewey calls it the Dalton Laboratory Plan. The underlying idea is that the class-rooms are now regarded as workshops or laboratories where the boys and girls carry out the practical work of their studies by the help of all the necessary apparatus gathered together there, just as the scientific apparatus is gathered in an ordinary laboratory.

Put very generally, the Plan consists in throwing a large amount of responsibility upon the pupils, prescribing the total amount to be studied for a given period, say a month, and then leaving them to work out their own salvation during those four weeks, on the understanding that they cover the whole ground by the end of the period and are prepared to stand a test of the thoroughness of what they have done. The pupils may begin with which-

ever subject they please, and work at it as long as they like. They can work some subjects more or less simultaneously, or concentrate on one for a day or two. The teachers thus give up teaching, and become advisers who keep regular hours in certain class-rooms where they can be consulted. But they are not supposed to interfere with the arrangements of the pupils, who may or may not use their opportunities of consulting them. Each pupil can thus go at his own pace, and follow his own inclinations, so long as he makes the necessary progress. He is put in the position of the German student who in the old days before the war exercised his *Lernfreiheit*. He was left to his own devices, and could cut lectures almost as much as he liked, so long as he reached the proper standard at the fateful final examination. The scheme worked not very badly in the case of the young men at the university, but many people naturally shook their heads over this daring innovation in a school. To be sure it has been stated above in its baldest terms, and with the strict rigour of the Plan. In actual practice at Dalton certain limits were set. The pupils' time from 8.40 to 11.50 was quite free to follow the Plan : the other school hours, however, were given up to recitation in the normal American way. During the free hours the pupils studied as they pleased, the teachers confining themselves to the following five duties :

(i) To preserve an atmosphere of study in the room.

(ii) To explain any detail of the assignment.

(iii) To give information with regard to the use of departmental equipment.

(iv) To give suggestions with regard to methods of attacking particular problems.

(v) When the need actually arises, to give full explanation of a point and of its relation to the general principle of the subject.[1]

It is claimed that the plan works exceedingly well, and that the pupils, being left to their own devices, and allowed to follow the method that most appeals to them, are able to make much more progress with their actual studies, while at the same time acquiring confidence in facing new problems on their own account. Naturally at the beginning there is always some confusion and lack of power of correlation. Some subjects get better done than others. But it is found that as things settle down it becomes increasingly possible for pupils to regulate their work so as to cover the whole assignment in the prescribed period. An interesting feature is that the pupils as a whole—of course, there were notable exceptions—preferred to begin with the more difficult and distasteful subjects.

The relation between Montessorianism and Daltonism is of interest. There are those who would put the matter very bluntly and class them plainly as cause and effect. No doubt the Montessorians were first in the field; to them must be conceded certain stimulating influences; and Daltonians are willing to give credit where credit is due. But the Dalton Plan is not fixed and complete: it is still in the melting-pot, and is taking many forms. For example, Mrs. O'Brien Harris at the County

[1] Evelyn Dewey, *The Dalton Laboratory Plan*, p. 75.

Secondary School, Clapton, has developed an original form based upon " Houses " instead of upon classes, where we have clearly the substitution of a larger organisation-unit for a smaller one. The House-Mistress becomes the unifying influence that moderates among the various specialists. Mrs. O'Brien Harris writes me as follows :

" Our main differences from ' Dalton ' are (i) the retention of class-teaching as an integral part of our work, and (ii) the relief to the congestion of the time-table by arranging that the number of subjects taken by a girl in any one term is (except in rare cases) less than the full number which she studies during the pre-matriculation period. The form system practically, though not necessarily, requires the full number each term.

" I think that the resemblances are more noteworthy considering the different antecedents of Miss Parkhurst and myself. I think *we have common ground in having taken Dr. Montessori's Training Course.*"

I have ventured to italicise the concluding words, as indicating the attitude of some reformers to the Founder. Elsewhere in her letter Mrs. O'Brien Harris says that her scheme is her " contribution to the adaptation of Montessori principles to secondary school work, under present Board of Education limitations." It is pleasant to find open-minded and ingenious teachers willing to give credit for the inspiration they have received from seminal writers like Dr. Montessori, but it is not a profitable occupation to spend time allocating priority to the different inventors. The Dalton Plan is really a crystallisation of a widely prevailing desire for greater freedom for children in their school-work. I cannot do better

than quote in illustration from the brief description in a leaflet that the honorary secretary of the Dalton Association has been kind enough to send me :

" The Dalton Plan is a scheme of educational reorganisation applicable to the school work of pupils from eight to eighteen years of age. It aims at giving the child freedom, making the school a community where the mutual interaction of groups is possible, and it approaches the whole problem of work from the pupil's point of view, giving him more responsibility for, and interest in, his education.

" The form rooms become subject laboratories, wherein are collected all the books and apparatus relative to the particular subjects.

" The pupils are still grouped in forms for convenience' sake."

The final paragraph acknowledges the retention of the class as an organisation-unit, while the penultimate paragraph suggests the alternative title that we have seen to be the Laboratory Plan anticipated by E. J. Swift's Laboratory Plan in his *The Mind in the Making* ten years before the Dalton Plan was enunciated.

Let it not be supposed that this anticipation by Swift, Nunn, and others in any way diminishes the praise due to the various initiators and reformers who have set the Plan in motion as a going concern. Each has the merit of advancing a movement the full credit for which can be attributed to no individual. The spirit of personal effort and responsibility was in the air at the end of last century and the beginning of this, and each reformer helped in its development. The value of their work will be the better appreciated when we note that there was and

is a great body of passive resistance against the new movement. There are many causes combining to oppose the development of the movement to get rid of the class as a teaching-unit.

No doubt the most prominent of these is the general conservative attitude of our craft. Most of us dislike change in our methods. The nature of our whole training and our relation to society is in favour of the conservative attitude. Parents and the State itself do not like teachers with much initiative. No doubt we are continually being urged to strike out in new lines and to make our personality felt. But the whole *vis inertiae* of society acts in the contrary direction. Most parents are content that things should go on in the smooth way to which they have become accustomed, and the alarming din made by the few progressive parents must not deafen us to the fact that the vast mass of the public is quite content to leave things as they are. The same general remark applies to our profession itself. We who persist in reading all the new educational books, and in attending educational conferences, are apt to get a false view of the attitude of the great body of our fellow-craftsmen. Most of them are quite content to follow the line of least resistance, and keep to their old familiar methods.

A second and a more specific cause of the wide-spread passive resistance to the rejection of the class as a teaching-unit is to be found in the teachers' love of class-teaching as such. Many of us do not sufficiently realise the attractiveness of the vigorous act of teaching a class as compared with mere

individual instruction. Among the many disagreeable qualities our friends the psycho-analysts find in human beings is the love of the limelight. We shall see, indeed, that one group of them make the love of power and the display of power the most vital driving force in life, and all of them proclaim that we teachers are in danger of allowing this particular desire to dominate unduly our professional life. We may retaliate by maintaining that the desire to instruct others is by no means confined to our craft. Do we not find lying in wait for us in railway compartments and other public places innumerable lay persons who are eager to instruct us in all manner of subjects ? Teachers, for example, have no monopoly of " letters to the editor," instructing all whom it may concern. But when all is said, there remains the depressing conviction that there is a good deal of truth in the charge that we are fond of instructing others, particularly when we get a chance of dealing with them in the mass. There can be little doubt, as we have seen, that we all teach too much. This does not mean that we teach too many things, that we burden our pupils' minds with too much matter—though that charge too is, unfortunately, sometimes justly made against us—but that we do too much actual teaching. We are apt to think that nothing of itself will come, but we must still be—teaching. Even in private coaching we are inclined to tell our pupils too much. It is so much easier and pleasanter to give our pupil the necessary information at once, instead of waiting till he finds out things for himself in response to our suggestions. But in class-teaching the tempta-

tion is still more powerful. Accordingly, we need not be surprised that many estimable teachers look askance at the Dalton Plan, and shake their heads over a scheme that removes them from the limelight, and relegates them to a place in the background, where they have to practise self-abnegation in the interests of their pupils' self-realisation.

A third reason for the unpopularity of the attack upon class-teaching is a positive one, and of a much more creditable kind. It carries the war into the enemies' country and defends by way of attack. Some teachers, while admitting the truth of the various charges against the class as a teaching-unit, argue that for certain purposes the collective method of teaching is the only satisfactory one. All that has been already said about the two aspects of class-teaching—instruction and stimulation—is applicable here. We cannot, of course, keep the two aspects quite apart. If there is one danger more than another that we should continually keep warning each other against, it is the fallacy of division by which we split up our work into separate compartments. Our pupils as persons are one and indivisible, and so is our work. All the same, there is a radical difference of treatment according to the results we have in view. Some parts of our work lay stress on the individual needs of our pupils, others on their needs as members of society. For this reason the class must always maintain its position as a potential teaching-unit, though no doubt this particular function will be much less exercised than it has been in the past.

Accordingly, the conscientious teacher can still

exercise the pleasant function of class-teaching without any qualms, knowing that he is thus at once economising the time of his pupils and doing a kind of work that cannot be so efficiently done otherwise. So long as he has a sufficient amount of genuine class-teaching in which he enjoys all the glow of manipulating that mysterious "sympathy of numbers," he will not grudge the free hours that in the future may become universal in our schools as the spirit of the Dalton Plan makes headway. He will soon realise by actual experience, if his professional insight has not been keen enough to warn him beforehand, that the free hours do not mean easy periods for him. Very much on the contrary, for his advice must be always "on tap" for young enquirers whose interest has been stimulated in the way it will certainly be under the new conditions. No doubt there will be at first an unpleasant feeling of being at sea, and removed from all one's bearings. There will arise also a certain anxiety about one's own special subject, a fear that it will be to some extent crowded out by others that have greater inherent or utilitarian attractions. There is danger of a clash of subject-interests. All this points to the need of a unifying influence in organising the application of the spirit of the Dalton Plan. Naturally the headmaster or mistress is the final unifying force, but the next in order is the house-master or -mistress, for these have a wider range than the class-teacher; and though they may also be specialists, their official status puts them in a better position than usual to see their subjects in true perspective in relation to the rest of the curriculum,

The need for such a moderating force among the claims of the various subjects is felt by all thoughtful teachers, and is exemplified in the French movement we have described under the name of integralism.

It is worth noting that just in so far as the Dalton Plan tends to disrupt the class it tends towards the promotion of the movement we have seen to be known in America as socialisation. This word is used in a rather peculiar way over there, and does not seem to be anywhere clearly defined. An analysis of the various ways in which it is used results in the separation out of two popular meanings, one general and one special. In a vague way socialising education means the correlation of education with the ordinary affairs of life, bringing the school into direct relation with the outside world. Sometimes this is spoken of as democratising the schools. Dr. John Dewey's *School and Society* did much to promote this attitude, and a well-known educational magazine with the same title is both effect and cause of the wide spread of this attitude towards education. The moment we begin to explore this aspect of socialisation we get into troubled waters. Politics of all kinds, but particularly economic questions, at once claim our attention and lead to acrid discussions that have no place in a peaceable book like this. Keeping strictly to our own province, the school, we find that the general aspect of socialisation appears in all the efforts to make the pupil realise that he is a member of a little, more or less self-governing, state. On the disciplinary side we shall deal with this aspect in our last chapter, and for the present

we shall keep to the more general meaning of the term.

To a reader unaccustomed to American terminology there is something intriguing in the title of Miss Ruth Mary Weeks' *Socialising the Three R's*. From what has been already said, it may be rightly guessed that these subjects are to be taught in such a way as to bring out their connection with everyday life. As Miss Weeks puts it:

> " Socialism goes to the root of aim and method ; infuses into ground plan and trivial detail of education the spirit of constructive sociology ; and sets in the heart of every teacher the question not simply ' How can I best teach this child to read, write, and calculate ? ' but ' How can I best fit him to survive in the world we know and also to help bring to pass the better world of which we dream ? ' " [1]

It is not difficult for Miss Weeks to illustrate the social applications of the three R's, and of such things as History, Art, Science, and Manual Training, though she is particularly successful in Arithmetic, which lends itself specially to such treatment, as Professor T. Percy Nunn has so well demonstrated in his lectures on the *Arithmetic of Citizenship*.

The second and still more technical meaning of socialisation brings the matter into direct relation with our present subject. In this meaning socialisation deals with the study of a subject on social or co-operative lines, involving a community of interest and of work. To some extent, therefore, we have an overlapping with the partnership

[1] *Op. cit.*, p. 6.

scheme of Mr. MacMunn, but his scheme lays stress on the work, whereas the socialisers give equal importance to the shared interest. For example, Miss A. L. McGregor tells us that :

" The object of a socialised lesson in literature is not to test knowledge gained, but rather to create a deeper delight in the piece of literature studied by giving the pupils a chance to talk over with one another the story which has now become a common possession." [1]

On the other hand, in a socialised lesson on the use of the dictionary, co-operative effort is as prominent as community of interest.

The Daltonians are just feeling their way here. The problem of co-operative study is giving them great concern. While carrying on their studies according to their own plans in keeping with the spirit of the system, should the pupils be allowed or encouraged to work in pairs or in groups ? At first it would appear as if permission to work in this co-operative way was really undoing the work of the Plan. Pupils who had just been freed from the direct control of their activities by their teachers would be merely thrust into another bondage. But the cases are quite different. If partnership is undertaken it is a purely voluntary arrangement. The pupils will naturally seek out those with whom they can work pleasantly, and there is always the loophole of a dissolution, if things do not go satisfactorily. Indeed, the partnership may well be treated as a temporary affair, and in many cases could be established *ad hoc*, in order to get

[1] *Supervised Study in English*, p. 73.

over a particularly hard bit of ground. Naturally these floating partnerships would fit in extremely well with any applications of the Project Method, for these we shall find may be easily combined with the Plan.

One technical difficulty about co-operative work is just its tendency to become permanent, for in this case there is the danger of premature specialisation. If, for example, in the preparation of language work one pupil specialised on looking up the dictionary, while the other confined himself to construing, a piece of translation might be completed in less time than if each did both parts of the work. Indeed, so economical of time is this arrangement that certain ingenious young persons in upper forms have occasionally adopted it as a means to ease their labours. The plan, however, usually finds little favour with the conventional schoolmaster, who regards it as an illegitimate way of getting at results with insufficient brain perspiration. As a matter of practical school politics it ought to be welcomed from every point of view, since it gives just that purposeful method of dealing with practical problems that is of most service in the ordinary affairs of life. The Daltonians will be well advised to encourage such partnership work, but ought to make it a condition that there should be a regular change of functions, every week. It can be easily explained to the youngsters that though they are right in their contention that quicker results can be obtained by keeping each at the kind of work he likes most and can do best, yet at school our purpose is to get practice in all

sorts of work. It will not be hard to make the construer realise that in real life he is not likely to find a dictionary explorer at hand every time he wants to deal with a difficult passage, and that, therefore, he ought to acquire a sufficient familiarity with the turning of his own dictionary pages. With this limitation, the co-operative method can be adopted as forming a quite consistent part of the Dalton Plan, and as supplying a particularly advantageous way of securing a wholesome form of socialisation.

At present the Dalton Plan is regarded with the profoundest suspicion by a vast number of teachers. They see all manner of cloven feet in and around it. But in spite of this it has taken a grip of the imagination of the profession that promises well for its development. Oddly enough it would appear that the Plan seems to be more popular in England than in America, which is generally regarded as its native place. We have seen reason to believe that it is not specifically American in origin, as it has developed naturally from tendencies that are quite as marked on this side of the Atlantic as on the other. Under whatever name it is known the progressive teacher will welcome the spirit implicit in the Plan, and will rejoice that an English Dalton Association has been formed and that it has now a local habitation as well as a name.[1]

But there is another side to all this, and fortunately we are still at a stage when a warning can be given without offence. In the development of every method there is a danger of rigidity. Very

[1] 35 Cornwall Gardens, Kensington, London, S.W.7.

often the need for a new method arises out of the rigidity into which an old method has fallen. Those who remember the old *Notes of Lessons* that students in training had to prepare, will realise how rigid a method can be, and will recall with satisfaction the relief that came with the five Herbartian Steps. But very soon *preparation, presentation, association, generalisation,* and *application* became as stereotyped as the old *Heads, Matter, Method.* The new classification that was to bring freedom from the bonds of long custom gradually developed chains of its own. It is hard to believe at the present moment that the Dalton Plan could possibly develop into a narrow tyranny. But this sort of thing has happened before with excellent methods, and may quite easily happen again, unless we are on our guard. Just now everything is in a state of flux ; all manner of experimentation is not only permitted, but encouraged. The Plan is being adopted in all degrees of completeness, from the whole-hearted organisation of a huge school like the Streatham County Secondary School to the timid introduction of the Plan in the work of a couple of classes. What it means I do not venture to say, but the fact is noteworthy that the women teachers have shown much more courage than the men in taking the plunge into the Plan. Few, indeed, even among the women have had the courage to adopt the Plan, the whole Plan, and nothing but the Plan. But all who have dabbled in it at all, and many who have not, are looking on with interest at the developments and are very tolerant indeed of each other's degree of acceptance.

As the Plan passes more and more into a technically organised and officially recognised system with a name terminating in *-ism*, there will inevitably arise an orthodoxy that will tend to become exclusive. At first sight it may appear absurd to suppose that a system based on freedom as its first principle should develop into a tyranny. But human nature is amazingly ingenious in finding ways of going wrong. It is not beyond its power to set about *compelling* pupils to be free. It was a wise man who said that the most difficult thing for a clever teacher was to let his clever pupils be clever in their own way. But a sort of parallelogram of forces may be arranged in such a way as to ensure against misapplication. By dividing the responsibilities between the specialist on the one hand representing the interests of the subject, and the house-master on the other representing the interests of the living child, a permanent interaction of mutually correcting forces may be set up in such a way as to secure vital activity, and thus retain the school as an organism instead of allowing it to turn into a machine.

There is, however, a further danger in quite a different direction. Even if we are able in the way suggested to secure the permanent freedom of the pupil, the teacher himself is not out of danger. It may well happen that in saving the liberty of the pupil the master may become himself enslaved. With an organised system, it is quite possible for the teacher to lose his liberty. There is no particular need in the Dalton Plan to have special mechanical appliances, but I have already seen

rather elaborate and certainly ingenious mark-sheets for recording the progress of the Daltonian pupil. They are in themselves entirely innocuous, and I have before me written evidence of their effectiveness in actual practice. But they are just the sort of thing that might develop into an external tyranny. Their very name, "Graphs," has a seductive attraction that should prove a red-lamp signal of possible danger. But surely it is within the power of teachers thus warned in time to avoid the ordinary temptation to allow an excellent system and excellent materials to turn into a tyranny. Let us use "Graphs" or any other legitimate means to improve our methods, but let us see to it that we do not purchase the freedom of the pupil at the expense of the freedom of the teacher.

From warnings with regard to future difficulties we are sharply recalled to troubles already existing, or at any rate said to exist. Interested and not necessarily hostile teacher-critics are much disturbed by certain considerations that are worthy of notice, and have been very effectively dealt with by Miss Rosa Bassett.[1] The first of these is the fear that too much responsibility is thrown upon pupils at an early age. It is suggested that the young people will worry over the distribution of their time, especially towards the end of the period for which they have had assignments. But experience seems to show that after the first period or two there is no more anxiety under the new system than under the old. It must be remembered that

[1] *Times Educational Supplement* for March 4, 1922.

certain types of children will worry about their work under whatever scheme they are placed. But the Daltonians maintain that, so far from being increased under the Plan, this worry is diminished, because the teacher is so much more closely in touch with the pupil. Justly enough we are told that the pupil who is worried about responsibility is the very person who needs such training in initiative as the Plan gives. For myself, I confess that I was among those who feared for the pupil an excess of anxiety through the added responsibility, and am accordingly glad to be assured that " under any plan the heedless child who neglected her work grew worried and flustered towards the end of the term. Now, there are fewer who neglect their work and fewer who are worried."

One recognises the voice of the severe disciplinarian in the reproachful question, " What is the moral effect of allowing children to choose their occupation at certain times, when in after life they will have to do what is set before them at a given time ? " The answer will be given in some detail when dealing with drudgery in Chapter IX, but Miss Bassett replies with a counter-attack, and asks if the rigid time-table of class-lessons has produced such a nation of people with high ideals that everything is done from a sense of duty and discipline. As the old conditions have produced such poor results it is not unreasonable that we should give the freer Plan a chance. This is good, but is hardly so strong an argument as might be expected. The Daltonians usually rely more upon the positive elements in their Plan.

It is only natural that those who remember their own schooldays should suggest that the Plan may be regarded as a boon and a blessing to shirkers. But such critics surely forget that there is a miniature day of judgment awaiting the shirker at the end of the assignment period. While the child is certainly thrown upon his own resources and made responsible for the use of his time, the teacher does not entirely abdicate. He may not interfere, but he is not blind: he keeps an eye on his little flock even while they are allowed to wander about very much at their own will. But if at the end of a period some youngster makes a serious breakdown, arrangements are made by which his freedom for the next period is curtailed, and if improvement does not follow he is placed on the old rigid time-table conditions. This may be said to be a confession of the failure of the Plan, and so far as these unsatisfactory pupils are concerned this must be admitted. Further, the proposed way of meeting the difficulty does threaten a serious complication of the school organisation. But the defaulter can be made to do his time-table work in the class-room under the eye of the teacher, while the respectable pupils are doing their free hours' work. This does not interfere with the general time-table of the school. Besides, the Daltonians explain that the free privilege is so much valued that the number who are willing to give it up for the rigid time-table is exceedingly small.

It may be well to mention here that there is a certain misunderstanding about freedom in connection with both the Montessorian system and the

Daltonian. The freedom granted is strictly limited. The popular impression is that in a Montessorian school the pupils do exactly as they please. But the freedom applies only to the school work. The pupil may work or idle, just as he likes. No pressure is put upon him. Further, he may work at whatever subject he feels inclined for at the time. He can select whatever piece of apparatus strikes his fancy. But he must use that piece of apparatus for the purpose for which it is intended. He must not play bowls with the cylinders. Further, he must do nothing to interfere with the comfort of his fellows. Besides, he cannot leave school at will. He may lie on his back for twenty minutes doing nothing but gaze at the ceiling, and nobody will interfere. But if he suggests going home, objections are raised. It could not have been an orthodox Montessori school about which the mothers complained that their children came strolling home whenever the fancy took them. So with the Dalton Plan. A reasonable amount of supervision is exercised by the teachers, though there must always be left a substantial amount of genuine freedom to the pupils, or the Plan is a failure. It is the mark of the capable teacher that he is able to find the just mean between freedom and licence.

Generally speaking, the Daltonians are optimistic, a quality which they share with the Montessorians. It is inspiriting to read Miss Bassett's remark: "Let all teachers realise that children want to learn." Some teachers have their doubts on this subject, and perhaps they are justified by their experience. But if Miss Bassett is justified by

hers, it means that under proper conditions children do want to learn. It *may* be that those conditions are not very pleasant for the pupils, as is illustrated by the advice given by a successful headmaster to a new and inexperienced assistant master in Ian Hay's *The Lighter Side of School Life*:

> " There is only one way to teach boys. Keep them in order: don't let them play the fool or go to sleep: and they will be so bored that they will work like niggers merely to pass the time. That's education in a nutshell. Good night ! " [1]

Dr. Montessori is equally confident in the power of ennui to drive pupils to work, though she does not put the matter so brutally as the theory-despising headmaster. She maintains that sooner or later the child will begin to attend to something or other, and she has almost infinite patience in waiting for this attention. However, the directress must be on the alert to take full advantage of the attention when it comes, and in the meantime to take every precaution that no outside matter of sharper interest shall be allowed to intervene. The child must attend to something, it is true, but the teacher must see that he attends to the right sort of thing.

While the Daltonians are optimistic, they do not shut their eyes to the difficulties of the situation, and one of the most prominent of these is the nature of our present text-books. They are not written in such a way as to suit the requirements of the Plan. Text-books, in fact, fall into two great

[1] *Op. cit.*, p. 63.

groups—those that are prepared from the point of view of the subject-matter, and those prepared from the standpoint of the pupil. They may be named, if we like, the logical and the psychological type. The former is much the larger class. The author takes a wide view of the whole subject and asks himself how he can arrange in satisfactory order all the matter required for the particular stage he has in view. The pupil is often considered to the extent that the vocabulary is kept within his reach, but no greater concession is usually made. The books are written on the understanding that they are to be *taught* rather than that they are to form the material for learning. An extreme set of books on the psychological side is formed by what are sometimes called self-educators. Here the teacher is deliberately excluded, and the writer addresses himself directly to the pupil. Such books are written largely in a friendly, personal style, the writer making a very free use of *you*. The orthodox text-book is severely third personal, but there has grown up an intermediate group in which the author does recognise the existence of the pupil as a person, and occasionally addresses him.

Some of these books make fair material for the Plan: but what is wanted is a series written expressly from the Daltonian standpoint. The matter should be arranged continuously, yet supplied with breaks at reasonable intervals, and there ought to be periodical big breaks, that might reasonably correspond to the monthly, three-weekly, or other fixed period adopted by the school. In one respect there is no difficulty in getting such

a series put on the market. Educational publishers are very keen, and are only too willing to produce what the teachers want. But the difficulty is generally, and here specially, to discover what the teachers really do want. They do not themselves know, but are gradually feeling their way. It is obviously some sort of compromise between the logical and the psychological type of book that is required. Whether it should be a mere outline with full references to books available in the school library, or a full treatment of the subject in a book that is self-contained, is yet to be determined. In all probability much experimenting is still necessary before the proper type is evolved. In the meantime a good deal of work will probably be done by guided reading in class libraries, which, however, will have to be greatly enlarged. The necessity for each pupil in a class having a separate text-book is no longer to be taken for granted. The possibilities of socialisation and partnership-work open out new problems, the solution of which will keep our live teachers happily and usefully occupied for several decades.

CHAPTER VIII

THE GARY CONTRIBUTION

THE architectural element is probably too grand a way of naming the influence brought to bear upon education by the manipulation of stone and lime. Edward Thring, with his usual insight, made much of " the mighty wall," and the teachers under the London County Council had an unforgettable illustration of the influence of building construction when they found how long it took for the Authority to work off the old schools in which the class-rooms were built on the sixty-pupil basis. Stone and lime have a peculiar charm for educational administrative authorities. A building is something you can see and boast about, whereas a teacher is a mere passing shade. So there is always the danger of bricks and mortar subtending a bigger angle in public estimation than the flesh and blood of the school staffs. Everybody who is interested in education wants to have as good buildings as possible, and no teacher will object to be housed in what the economists persistently nickname a " palace," so long as the personal remuneration is in keeping. At present, however, we are concerned more about the influence that school buildings exercise upon the organisation of school work.

In the examinations of students in training to be

teachers it used to be common to set questions about the structure of schools, and the architectural details of school buildings. But this has become more or less obsolete, no doubt for the reason that it is realised that these matters are not within the province of the practical teacher. Formerly it was taken for granted that the teacher took the whole of the school world for his province, including the structure within which he did his work. With the increasing division of labour, school architecture found its place among matters that can be relegated to outsiders who know nothing about the details of school management. The planning of schools is now left to architects who have specialised in that branch, so that the ordinary teacher has to regard the school-building and the class-room in which he teaches as part of the data of his professional problem.

All the more important, therefore, is the lesson that we have to learn from an educational experiment that has made a great stir on both sides of the Atlantic. There is a town—the Americans prefer to call it a city, since it has somewhere about 50,000 inhabitants—built on the sand dunes at the southern point of Lake Michigan, in the State of Indiana. It is a mushroom town, and need not trouble about its jubilee celebrations for some thirty-odd years yet. It was deliberately planted where it is by the United States Steel Corporation for the corporation's own ends. It has developed for itself an educational system of some originality. The school organisation began in September 1906, opening, we are told, " with one teacher occupying

a one-room building." But the gods were kind to Gary, and sent along in the following July a certain William A. Wirt, who gave his mind to his work as Superintendent of Schools. He is a man of ideas, of " poetic insight " as some of his admirers tell us. In any case he set about his work with such vigour and initiative that his town soon came to be the most-talked-of place among all the educational centres in America. From some points of view he had a most unsuitable site for his educational organisation. In the midst of an industrial area peopled to the extent of two-thirds by folk who were either foreign-born or of full foreign parentage, he had little encouragement to start an educational crusade. On the other hand, he had no tradition to fight down ; for we can assume that the solitary teacher in the single room did not present an overwhelming resistance. It is not given to every man of originality to develop his schemes in such a way as to call for a specific name for his work. The very fact that people interested in education now talk easily about " the Gary System " means much ; but the fact that it is frequently referred to as " the so-called Gary System " means more. A system is well on its way to wide influence when it attains to the adjective *so-called*.

Out of the volumes that have been written on the subject it would appear to be hopeless to select any one principle and maintain that in it is to be found the quintessence of the system. But we shall not go far wrong if we seek the root idea of the whole development in Mr. Wirt's attack on a view based upon a detail of school architecture.

His scheme is sometimes called one of duplication, and his schools have been called " duplicate " schools. The terms are somewhat misleading, and the subject can be better approached from the human side in Mr. Wirt's challenge of the widespread opinion that all schools should provide a seat and a desk for every pupil. There is something very attractive in the schoolman's perversion of a well-known saying: " A place for every pupil, and every pupil in his place." At this maxim of pedagogic tidiness Mr. Wirt tilted with all his might, maintaining that there is no more need for a separate seat in school for every individual pupil than there is for a separate seat in the public park for every individual citizen. When the pupils were engaged in playing, or in physical exercises, or in the workshop, or in the library, their class-rooms were empty; and Mr. Wirt, like Nature, abhors a vacuum, and, like Nature, at once proceeded to fill one when he found it. His plan was the very simple one of providing class-room accommodation for only half the number of pupils attending a school. He calculated that, roughly speaking, each pupil should spend only about half his time in class-work. To give effect to this scheme all that seemed necessary was to count each school as available for double the number of pupils for whom it was originally intended, and we can easily picture the enthusiasm with which the education authorities in an expanding town would welcome a superintendent bringing such a money-saving proposition. But Mr. Wirt realised that to give his scheme fair play it was necessary that what may be called the public parts of a school should be increased

and improved, if they were to account satisfactorily for half the school time of the pupils. The new scheme, in fact, demanded a school specially built for it. Accordingly, Mr. Wirt calculated what an ordinary school in Gary would cost in order to accommodate a certain number of pupils, and then asked his committee to provide a sum just a little less than that, and to allow him to build the school in his own way. Since his scheme involved a slight saving, whereas nearly every educational innovation involves an increased expenditure, he was allowed to proceed. The result was a school with about half the usual class-room accommodation for the number of pupils on the roll, but with a specially large and attractive suite of rooms for general purposes. The playgrounds were more than usually extensive and well-equipped ; there was a swimming-bath, a conservatory, work-rooms, libraries, recreation-rooms, laboratories, art-rooms. Other schools followed with ever-increasing elaboration of the general and social accommodation, till the most recent buildings must be regarded as something approaching very closely to the ideal.

Without doubt Mr. Wirt did his best to keep down expenses in carrying on his gradually elaborating schemes, but it would be against all human experience if his outlays could be kept within the limits of his estimates, so it is likely that he looked about deliberately to find fresh justifications of his expenditure. Fortunately, he found them without having to go too far afield : in fact, they developed out of his educational plans. His abhorrence of a vacuum did not die down the moment the school

hours were past. He was hungering to fill up the schools all the time. The more his fine and expensive buildings were occupied, the less his Board could find fault with their cost. Arrangements were made by which parents could utilise in the evenings some of the recreation and other public rooms of the schools, so that the community might have the feeling that it was directly benefiting by the improved accommodation provided for the youngsters. But Mr. Wirt was not content with this indirect utilisation; he wanted the buildings to be occupied for longer periods by their legitimate tenants, the children themselves. Accordingly, the school day was gradually lengthened, and additional work was put on at various out-of-regular school-hours, and days, till at last an admiring critic was able to write: "The schools are in session twelve months a year, and for seven days a week for certain features, six days a week for all features." [1] After the cold shiver this alarming announcement must have caused the enquiring teacher, he will be anxious to know how this never-ending chain of activity is organised.

From the lowest grades the Gary schools are worked on what the Americans call the departmental system, which corresponds to what is known in England as the specialist system. The pupils pass from room to room according to the subject they have to study at any particular time. In other words, children of the tenderest years have to carry on their work on exactly the same principle that is applied in our newer English universities. But objectors must remember

[1] Henry S. Curtis, *Education through Play*, p. 167.

that Mr. Wirt is dealing with American children, and American children are accustomed to have responsibility thrust upon them at a much earlier age than ours. Still, even young Americans cannot be expected to take full responsibility for their own education. Their course of study is determined in consultation with responsible teachers, though to the child himself is left the carrying out of the programme agreed upon. The departmental system is by no means a new thing in America, and the special contribution Gary makes here is the wholesale way in which it is applied. Before Mr. Wirt's time the junior parts of schools were not departmentalised.

The grip that the Gary system takes upon the life of the pupil is indicated by the somewhat clumsy compound adjective often applied to schools conducted on these lines. When it is said that they are "work-play-study" schools, it is claimed that they make provision for all the activities that are usually called work, all those that expend themselves in recreation, and all those that are devoted to intellectual pursuits of every sort. The school thus takes possession of the whole life of the pupil, and to that extent usurps the place of the home. To compensate for this there is the tendency to bring the home closer to the school by affording opportunities for the parents to utilise the school buildings.

It would be perhaps too much to say that the system has a communistic basis, but it certainly suggests communistic ideals. Its promoters would rather express its aim as a training in citizenship, and they maintain that this training demands some sort of communal work. But the community is

not limited to the school: the unit is the town: the work of the school may be brought into touch with the ordinary life of the citizens, and much ingenuity appears to be expended in bringing about contacts. Thus some years ago we were informed in an article in *The New Republic* that the city analyst at Gary was also a teacher of chemistry in the schools, and that some at least of the necessary routine analyses were made in the school laboratories, by the pupils. Thus the regular periodical analyses of the town water were made by the pupils, and the purity of the various candies sold in the town was guaranteed by making the school pupils responsible for the necessary tests. It is hard to say how far this educational realism may go, but it certainly gives us material for serious reflection.

The American teachers have shown themselves on the whole suspicious of the system: it is not hard to see why. They were at first inclined to believe that the underlying motive for its adoption was the saving of money to the ratepayers—that it was, in fact, a cheap substitute for the ordinary arrangement. But there was further the grim prospect of a school always in session, summer and winter, spring and autumn, week-day and Sunday, morning, noon, and night. Even with the layman the imagination reels at this prospect of ceaseless education, while to the teacher is the added horror that he himself is necessarily a permanent performer on this never-stopping treadmill. But closer investigation hardly seems to bear out the description of the enthusiastic critic we have quoted, and the official account of the system gives a more reassuring

statement of the facts of the case. This account itself, published in eight [1] separate but not very large volumes, is the outcome of the steady stream of adverse criticism that was for long directed at the system. The Board of Education and the City Superintendent of Gary asked the General Education Board to make a study of the Gary schools in order to have them put to the test of independent investigation. In the *General Account* that forms the first volume of the series we are told that the average school day in American cities over 100,000 is five hours, while in cities from 25,000 to 50,000, among which Gary ranks, the day is five and a quarter hours. Referring to the three big typical Gary schools, the *Account* tells us :

" The official school day at Gary is for children seven hours—from 8.15 to 4.15, with sixty minutes for luncheon. The lengthened school day provides the additional time needed for the special branches. Meanwhile the common branches continue on the whole to receive as much time at Gary as elsewhere. Fifty representative cities average 5,388 hours of instruction in the ordinary studies as compared with 5,048 at Gary, a total difference of 340 hours spread over eight years. The three R's are allotted 3,904, as against 4,022 in fifty cities. Gary's departure is thus almost wholly in the field of the special activities ; the 2,732 hours gained by lengthening the school day keep the children off the streets and make time for physical training, shop work, drawing, and the auditorium." [2]

[1] The titles of the volumes are as follow: *The Gary Schools, a General Account ; Organisation and Administration ; Costs ; Industrial Work ; Household Arts ; Physical Training and Play ; Science Teaching ; Measurement of Class-room Products.*

[2] *Op. cit.*, p. 58.

Mr. Henry S. Curtis, looking at the matter entirely from the pupils' point of view, cordially approves of the lengthened school day,

" because the extra hours have been taken from the idleness and ' the street and alley time ' of the children. It has thus removed the chief source of dissipation and vice, and given a great positive advantage at the same time." [1]

All this is in itself very satisfactory, but it leaves teachers uneasy. An increase of nearly two hours a day is a serious matter, unless there are compensations. The *Account* tells us that we should remember that where there is a short school day the teachers are expected to give time after school to records, reports, and outside duties, making up in all a six-hour day. But when we have remembered this we do not forget that there is still an absolute increase of one hour, and would point out that there is no reason to believe that the seven-hour day would not be accompanied by the same, or even a slightly increased, amount of out-of-hours duties. Teachers will read with much more satisfaction what the *Account* has to say under the head of Teaching Staff :

" There is, however, no reason why the school building and the pupil should not have longer hours without equally increasing the length of the teacher's day. In fact, one advantage of the Gary organisation is that the day for the building may be one thing, that for the pupils another, and that for teachers still another. Indeed, the teacher's day can be made of any length whatsoever, though of course the shorter the teacher's day the more teachers are required,

[1] *Education through Play*, p. 174.

and hence the larger the budget for teachers' salaries, or the smaller the salary per teacher." [1]

Despite the " decided movement throughout the country, notably in New York and New Jersey, toward lengthening the school days in cities," and the corresponding tendency we have noted in England, the teachers can console themselves by remembering that there are such things as working by shifts : that there is the possibility of a maximum number of hours per day, and a maximum number of weeks per year—though this last does not appeal so strongly to American teachers, who are paid by the month, and thus not automatically paid during holidays as we are. Within this maximum it is quite possible to have a much wider choice in the distribution of working time than is at present available under our cast-iron system from somewhere round about nine o'clock a.m. to somewhere round about four o'clock p.m. What appears to threaten an intolerable oppression may be the means of bringing increased freedom. If in England the tendency develops, and it becomes a matter of practical politics to increase the school day in such a way as to have all the school work done on the premises and let the children leave for home quite free from further scholastic preoccupation, it will be wise for the teachers to encourage the sort of extension that the Gary system seems to favour ; for in this way it will be possible to meet the demands of parents and the needs of the pupils, without overworking the individual teacher.

[1] *Op. cit.*, p. 72.

It goes without saying that an extension of the school day would result in greater freedom of choice for the pupil. Under our present arrangements the rigid school hours make it imperative that the pupils should all be occupied at the same times. Any demands, social or industrial, made upon the pupil's time during school hours can be met only by directly interfering with school work. One of the chief difficulties we shall have to face, when the part-time work for pupils between 14 and 18 comes into operation, will be the fitting in of school and work time. With a more or less continuous set of lessons on the Departmental plan it would be possible to get in the school work of the " young persons " without unduly interfering with vocational duties. There could be morning courses, midday courses, afternoon courses, and, more doubtfully, evening courses. In this way the young persons could fit themselves in with comparative ease at various points where they could get most benefit from the instruction actually going on, and thus minimise interference with their duties at the workshop, the factory, the warehouse, or the counting-house. Naturally the time-tables in such schools would become very complicated, but there is no reason why they should be unworkable. The late H. W. Eve, when Headmaster of University College School, London, used to remark with satisfaction that practically every one of his five hundred boys had a time-table different from that of his fellows. Yet the school was well organised and worked smoothly.

Naturally there would need to be a group of

teachers of a new type, corresponding somewhat to the deans in the universities. It would be their duty at the beginning of each term to fix the particular subjects and grades that would meet the need of each pupil. It would be the business of this new class of directing teachers to mediate between the pupils and the specialists. Adult pupils may be left to fight their own battles with their specialist instructors, but children require to be not only guided in their choice of subjects but supervised in carrying them on. The experts who looked into the affairs of the Gary schools indicate that this is a line of weakness at present. It is not inherent in the system, but it is one of the dangers to be guarded against in its application. The allocation of the work was all right, and the arrangements for supervision were in themselves excellent, but were not applied as they ought to have been. Pupils changed about from class to class during term, in the independent way American children have, without consulting the responsible teachers. The pupil's programme-card states quite precisely " No dropping of class nor change of programme will be permitted without the written consent of the assistant superintendent." A very little office work would put it out of the power of the young people to take the law into their own hands in the way they appear to have done.

Perhaps the dean type of supervising teacher is not sufficiently prominent in the Gary scheme as at present applied, but in the nature of things his function is essential to the successful working of the new plans. Each dean would have a definite

number of pupils assigned to him, and his primary duty throughout the year would be to see that each of them conducted his studies according to plan. A reference to present practice is always reassuring to English teachers, and it will not fail to occur to them that this apparently new official is merely a development of the titular form-master who is at present a feature of our secondary schools. He originates from the need of making specialism in schools workable. Specialists from the very nature of the case have a tendency to pay undue attention to the subject-matter at the expense of the pupil as a human being. As a result of the system, the specialist has to deal in the course of the school week with a vastly greater number of individual boys than the old-fashioned form-master. Inevitably, therefore, he has less knowledge of and interest in individual boys than was the case under the old system. To obviate this defect the natural device has been adopted of supplying each form with a titular master whose business it is to look after the pupils in that form from the human standpoint. He is to be their father confessor, to be responsible for them to the outer school world, and to defend them where defence is possible and desirable. It is generally contrived that this form-master teaches one subject with his form, usually Scripture or English, but even if he does not teach them at all he still binds them together into a sort of schematic "form." He represents their corporate existence, he gathers up in himself the collective personality of the group. He may be a specialist to others, but to his form he is merely a

master whose specialty is boys. He has been known to call himself a specialist " in Mathematics and in Form IV." As things develop, it is not unlikely that mathematics will fall more and more into the background, and Form IV move more and more into the limelight of his attention.

It will not have escaped the reader's notice that we are here gradually approaching from a new starting-point one of the developments of the Dalton Plan. These new teacher-deans or titular form-masters would fit very well into the functions of the house-master or -mistress as these offices are developing in the Dalton Plan. The stone and lime arrangements suggested by Mr. Wirt fulfil admirably the requirements of the Dalton Plan, and the fact of this convergence is an argument the more that the Daltonians are on the right tack.

One disquieting feature of the report that the experts made on the working of the Gary system is that they do not find that in the ordinary school subjects the schools quite hold their own with the other schools in the country. They have emphatically succeeded in their special aims, but somehow they do not appear to have got on so well with plain reading, writing, and arithmetic. To quote the report :

" It must be recognised that no educational system can be considered to have completely established itself until, whatever else it achieves, it has also secured the fundamental educational values represented by the essential tools of learning. The results of testing the Gary schools do not invalidate the effort to socialise education, but it is evident that the Gary experiment has not yet successfully solved

the problems involved in the socialisation of education, in so far as efficient instruction in the necessary common school branches is concerned." [1]

But the sympathetic observer need not be greatly troubled about this lapse. There are many explanations besides the intrinsic qualities of the system. There is first the preponderantly foreign nature of the population: the majority, as we have noted, being either foreign-born or of full foreign parentage on both sides. Next there is that lack of effective supervision that is not an inherent defect in the system and yet has a great deal to do with just such a weakness as has been noticed. The experts report that " the quality of class-room instruction at Gary falls short of what is necessary," but in another part of their report they give the reason. It is said [2] that the meagre and formal character of the class-room instruction may to some extent at least be explained by the fact that the existence of such a prominent system of shops and laboratories, libraries and workrooms, conveys the impression that there will be no difficulty in making the necessary applications, so the class-teachers may, without sin, stick rather rigidly to the formal treatment of their subjects. There is further a peculiar official in the Gary system whose very existence may to some extent weaken the sense of responsibility in the minds of class-teachers. This is what is called the " application teacher." Her special concern is to assist backward pupils and to place before the children real problems of the type that the world

[1] *The Gary Schools : General Account*, p. 105.
[2] *Op. cit.*, p. 102.

of industry, business, and citizenship will place before them when they leave school.[1]

The knowledge that there are such functionaries on the staff is certainly likely to blunt the conscience of the ordinary teacher, who will naturally concentrate on her special subject and let the appropriate official see to the necessary applications. It is evident in any case that the facts at Gary do not witness in favour of the retention of this particular functionary. It appears that in 1916 there were only four application teachers on the staff, and that one of these did specialist work in addition to her "application." The lesson of these abortive officials is important. Not only do they not serve the purpose for which they were appointed, but they tend to prevent others from serving it. There may be room in the school system for an application teacher or teachers, but their functions should be to deal with the staff, not with the pupils. The dean-teachers of whom we have spoken may well include this function among their others. What is wanted is a deliberate influence exercised on the staff in the direction of that unification of purpose demanded by the integralists.

One of the most characteristic features of the Gary system is the use of the auditorium. In the interests of the corporate spirit, our English schools are fully alive to the need for some gathering-place where the whole school can meet for at least a few minutes every day. Many teachers are prepared to put up with a great deal of inconvenience for themselves and their pupils during these few minutes, rather than

[1] *Op. cit.*, p. 83.

give up what the meeting implies. At Gary the feeling after collective unity is as strong as elsewhere, but the auditoria are not big enough to meet the needs of a mass meeting of all the pupils. They are used throughout the day by instalments. It would be entirely against the Wirtian policy to have a vacuum all day long in the auditorium after the morning exercises. To be sure, in our English schools it is rare to find a school hall vacant at any period of the day; almost invariably the needs of the school secure a little overflow class in one corner or other, sometimes in one or two corners simultaneously. But this surreptitious use is deprecated, and explained as being forced upon the teachers by the necessities of the case. Certainly a school hall is better used in this way than left to insult the spirit of Wirt with a vacuum. But at Gary the auditorium is used pretty constantly all day long, and that for its special purpose of massed teaching and training. The auditorium is really a class-room for such work as can be done by very large groups. The audience in the auditorium is made up of several classes close enough in attainments to benefit by the mass treatment. Thus a day's use of the auditorium at the Froebel school, the largest at Gary, may be set out in tabular form:

	8.15 to 9.15	9.15 to 10.15	10.15 to 11.15	Interval.	1.15 to 2.15	2.15 to 3.15	3.15 to 4.15
Number of classes	7	9	7		5	8	8
Number of pupils	219	276	223		135	293	264
Grade span	4b–6b	1a–4c	6b–11		6a–10	1b–3a	3c–6b

The resemblance to David Stow's "gallery lessons" at once strikes the reader, though it must be admitted that Gary works on a grander scale, and is more merciful to its teachers. For no one teacher is kept at the wheel for a whole day, or indeed for a whole hour. For the work is so distributed that everybody who has a talent for collective teaching has his chance. Dr. Hayward would be in his element as the organiser of the sort of general culture lessons and demonstrations that are in daily progress in the Gary auditoria, and Mr. Caldwell Cook would find an admirable outlet for the energies of his Littlemen. The fact is that sometimes the auditorium exercise suffers materially from the lack of just such sustained guidance as these men could supply. We are told that the value of this collective work varies greatly—from dead failure to brilliant success. The movement, however, is steadily towards normal success. Teachers of special powers of organisation are gradually taking the matter in hand, and regulating it in such a way as to enlist the services of those who excel in these activities, which, be it remembered, demand a rather special kind of talent.

The reporting experts tell us bluntly that they cannot at this stage pronounce a final verdict on the Gary auditorium, but they are quite sure that the makeshift auditorium in a small school without proper leadership or equipment, and as a practical substitute for class work in literature and music, is a failure. One point that I am surprised has not attracted more attention is the possibility of big advertisers taking up the auditorium-hour for their

own purposes, paying their way handsomely by providing genuine educational material for three-quarters of the hour, and making even the remaining quarter that deals with their own matters instructive as well as amusing to the children. Propagandists of all sorts will soon begin to move in the matter. The hour that at present lies in the lethargy of half-somnolent art may waken up in the near future to find itself the most imposing feature of the school.

CHAPTER IX

THE PLAY WAY

MR. H. CALDWELLCOOK has deserved well of his craft by publishing his attractive volume under the question-raising title of *The Play Way*. The three words exactly describe the subject dealt with, but experience clearly shows that the nature of the book is very generally misunderstood by those who have not taken the trouble to read it. There are two main lines of misunderstanding. The use of school plays is now so common that it is perhaps not unnatural that there is a widespread impression that Mr. Caldwell Cook has written a treatise on how to carry on stage work in schools on educational principles. The casual reader turning over the pages of the book, and noting the number of photographs of boys in various theatrical costumes and attitudes, gets confirmation of the general impression, and carries away the idea that the work follows the lines of Miss H. Finlay-Johnson's *The Dramatic Method of Teaching*. But the two books approach the subject from quite different standpoints. The lady recommends the dramatic representation in all subjects. Naturally history and literature lend themselves most readily to this treatment, but she is not at all disposed to limit the method to them.

She practically takes the whole school curriculum as the province of the dramatic, and applies her method all the way through. Mr. Caldwell Cook, on the other hand, accepts dramatic representation as one of a variety of ways in which he can get the pupils to take an active part in the learning process. His main concern is to get the pupils to take at least their fair share in all school work, including especially that part that is usually called " lessons." Dramatisation no doubt supplies an excellent means of reaching this end, but it is far from being the only one. The youngsters—*Littlemen* is the technical term he uses for boys at the Perse School who are under thirteen years of age—are encouraged to carry on debates, give little lectures, write topical verses, draw quaint imaginative maps.

The second line of misunderstanding is to regard play as a diversion, a recreation, a relief from work. Those who expect to find an exposition or even an exemplification of the various theories of the psychological nature of play [1] will come away disappointed. Mr. Caldwell Cook is almost vehement in his rejection of this diversion theory. He assures us " that the play methods suggested throughout this book are not a relaxation or a diversion from real study, but only an active way of learning." [2]

The fact is that in the title of the book the word *Play* has attracted too much attention to itself at the expense of the less aggressive word *Way*. For

[1] Those who want information of this kind will find it well put in Mr. Walter Wood's *Children's Play and its Place in Education*.

[2] *Op. cit.*, p. 30.

Mr. Caldwell Cook is expounding a method or way in which he proposes that all learning and teaching should be carried on. In this case the play is not the thing; the mode of approach is what counts. To say that work is to be attacked in a playful spirit conveys a curious suggestion of frivolity that is quite out of harmony with the tone of the book. Mr. Caldwell Cook has taken to heart the saying of a St. Louis schoolman quoted by Professor W. C. Bagley in his *Craftsmanship in Teaching*: "The dominant characteristic of the child's mind is *seriousness*. The child is the most serious creature in the world." [1] The Play Way is not a matter of lowering serious work to the level of flippant entertainment, but of introducing a joyous element into the grim region of hard work. The spirit of Mr. William Platt's *The Joy of Education* is generally praised, but many are unable to suppress the comment that it cannot be realised in actual school work. Mr. Platt's experience in his own school is a practical exemplification of the workability of his theory, and Mr. Caldwell Cook supplies confirmatory evidence from practice, accompanied by a more or less reasoned statement of the principles on which his methods are based. The introduction of the play spirit into work is often regarded with suspicion, but an excellent defence may be set up based on the difficulty of distinguishing between work and play. The moment we look into the matter we realise that while a logical distinction can be readily made by declaring work to be what we must do for a living, and play what we do because we want to

[1] *Op. cit.*, p. 125.

do it, we feel that we are dealing with abstractions and unrealities. Professor G. H. Palmer drives a wedge into the distinction when he says in *The Ideal Teacher*: "Harvard College pays me for doing what I would gladly pay it for allowing me to do." [1] Tom Sawyer's glorious manipulation of the painting of the fence drives the wedge home and splits the definition.

Yet the practical person feels that a distinction does exist, and is very much afraid of anything entering the educational system that will do something to diminish the distinction in school and to that extent disqualify the pupil for his life in the real world that follows school and that certainly recognises a marked difference between play and work.

Against Caldwell Cook and Platt and the Neo-Herbartians on the one side, there is opposed a great body of practical, hard-headed, and not too soft-hearted teachers who hold up for our admiration what they complacently call "the good old grind," and solemnly warn us against the snares of "the primrose path." They tell us that there is no need to make things interesting. In their after-lives the pupils will not find the world putting itself about to make things interesting for them, so it is well to get them to accustom themselves betimes to face the uninteresting. To all this a cheerful assent may be given. It is well that our young people should acquire the power of dealing with things that are not intrinsically interesting. But this does not mean that we ought to go out of our way

[1] *Op. cit.*, p. 3.

to find subjects that are in themselves uninteresting and dull. Yet the good-old-grinders go even so far as this, and read with satisfaction what Dr. Alexander Hill has to say in Spencer's *Aims and Practice of Teaching*, where, after praising the Classics as a means of developing the power of sustained and orderly thinking, he goes on:

"Some part of the credit for this most desirable result must be attributed to the discipline of working at a subject which offers in itself no temptations to work. No advantages from the schoolboy point of view are to be derived from its study. It does not come near enough to his own life to arouse his curiosity. His only motive for learning his lesson is that his master tells him to do so; and this, we think, should always be sufficient." [1]

To clear up matters it should be realised that there is a widespread confusion between the interesting and the pleasant. What is pleasant is usually interesting, but what is interesting is not necessarily pleasant. It is hard to imagine a more interesting place than the dentist's chair. Etymologically the word *interest* indicates that the thing that attracts us is what we are mingled in, and form a part of. It concerns us. To set up interest in a matter is to get into contact with it at as many points as possible. To be told to learn Latin does establish a contact, but a quite insufficient one. So far from removing school subjects out of the range of ordinary experience, we ought to connect them up in every possible way. This is being more and more recognised every day. In our next chapter we shall see that arithmetical problems are no longer of the absurd kind

[1] *Op. cit.*, p. 283.

that used to be common, dealing with all manner of improbabilities, not to say impossibilities. Geography, except when in the hands of the advanced scientific group, who appear to be afraid to mention a proper name in a geography lesson, deals with matters that the pupils recognise as part of real life. Even history is brought into touch with what is going on to-day and therefore concerns us.

But the veteran good-old-grinders need not be discomposed after all. The introduction of the element of purpose into the work of the school certainly rouses interest, but it does not dispose of the need for hard work. There will always be enough of the intrinsically uninteresting to supply all the mental strain that is necessary. The uninteresting cannot be altogether eliminated. As that good-old-grinder, Professor Bain, remarks with unseemly satisfaction :

" Then comes the stern conclusion that the uninteresting must be faced at last ; that by no palliation or device are we able to make agreeable everything that has to be mastered. The age of drudgery must commence : every motive that can avert it is in the end exhausted."[1]

After all, the teacher who wishes to utilise interest does not seek to eliminate the uninteresting. What he wants is to put it in its proper place in relation to what is interesting. There has been a long and tiresome discussion about the classification of the various forms of attention, the point in dispute being the relation between the two forces—will and interest—that determine the manipulation of atten-

[1] *Education as a Science*, p. 184.

tion. The old distinction was between the voluntary and the involuntary forms. The first was marked by the deliberate exercise of will, the second by the absence of this exercise. Naturally there arose confusion, because "involuntary" might be held to mean not merely without will, but against will. Accordingly, the words *non-voluntary* and *avoluntary* were suggested. Others introduced a new term, *spontaneous*, and rendered confusion worse confounded. It is much simpler to get rid of the element of will altogether, and reduce the classification of the different aspects of attention to a twofold one, adopting the sense of effort as the basis. We can establish quite a satisfactory dichotomy by dividing all forms of attention into two, the one marked by the presence of effort and the other not. Effortful and effortless attention are quite easily marked off from each other, and may be named—after the Latin *nisus*, a striving or an effort—*nisic* and *anisic* respectively. The names, being entirely new, are burdened with none of the misleading connotation that hampers the use of the older controversial terms. Besides, they permit of as detailed an additional analysis as may be thought necessary in the case of the nisic form, for it is obvious that while attention must be either nisic or anisic, the nisic kind may involve any degree of effort.

The educational importance of the distinction between the two main types of attention may be well illustrated by the question sometimes raised about which form should be used at the earliest stages. It used to be said that the teacher ought to begin with the involuntary form and pass on to

the voluntary. Probably the cause of this preference was that voluntary attention sounds much more dignified than involuntary. It obviously represents a higher form of mental activity, and it is therefore not unnaturally regarded as forming a goal. But when we adopt the division into nisic and anisic, it will be found that the real progress is from the nisic to the anisic. It surely cannot be the purpose of the teacher to make his pupils pass from an attention that does not demand effort to an attention that does. The truth is that we are continually using both forms of attention, and continually passing from the one form to the other; but the greatest part of our work is carried on by the anisic form. It is true that the teacher's business is not to save his pupils from making efforts, but to encourage them to make efforts. Yet it has to be kept in view th at he does want to train his pupils to economise effort, to get full value for every effort made. Nisic attention should be used only when it is essential, so that the pupil's efforts may be conserved and directed into the most profitable channels. We shall return to this matter presently.

The good-old-grinders have on their side the undoubted fact that drudgery has to be faced in this world, and it does not seem an unreasonable contention that our pupils should be made to face drudgery as soon as possible. But even the reactionaries shrink from carrying their principle to its legitimate conclusion. They baulk at the suggestion of drudgery-drill in schools. They do not relish the idea of specifically training drudges. But if they draw the line there, the question is reduced

to one of degree. If drudgery is to be practised not in and for itself, but as a by-product of some school process, then the progressive teachers differ from the reactionaries merely in the remoteness of the drudgery work from the work that makes it necessary and at the same time tolerable. If we take the dictionary meaning of drudgery as "uninteresting toil," we want to know if there is an absolute point below which drudgery makes its first appearance, or if there are degrees of drudgery. No evidence is produced of the existence of a standard degree of interest below which work becomes drudgery, so we may assume that it is a matter of degree, and that therefore the more interest we can introduce into a given piece of work, the further removed it is from drudgery.

But interest is commonly regarded as of two kinds, direct and indirect. It is impossible to get up direct interest in certain matters, but if we can rouse a sufficient amount of indirect interest it may serve our turn. In order to attain some end in which we are really interested, it is often necessary to undertake a good deal of uninteresting toil. But the attraction of the final goal is sufficient to spur us on to the "mean toil" of the dictionary definition. In fact every experienced teacher is familiar with the toil pupils will undertake in order to attain some much-desired end. The labour we delight in physics the pain of its otherwise uninteresting accompaniments. This applies even to purely school-room activities, as, for example, in the case of the boy who because it became fashionable among his school-mates to read upside down, started in

earnest to learn to read rightside up in order to be "in the movement" of reading upside down. Any pupil with a fairly wide range of interests will find some part of school work that it is to his advantage to work up. It is the business of the teacher to present matters in such a way as to facilitate this passing on of indirect interest to matters that otherwise would be pure drudgery. Obviously the best plan for rousing the initial interest is to see that everything undertaken by the pupil has some more or less definite purpose. For this gives a meaning, and therefore suggests an interest.

The pupil cannot be expected to be interested in something that is merely presented to him by another with the demand that he shall do a certain piece of work according to the directions laid down by that other. He is not sufficiently involved in the process to feel that he is a real part of it. One of the most marked characteristics of the New Teaching is that the distribution of work between teacher and pupil is better understood. We now realise that the highest function of the teacher is to stimulate his pupils to take their proper share in the activities of the class-room. There may be learning without teaching, and there may be a process that passes by the name of teaching and yet is unaccompanied by learning. But there is no true teaching unless it brings about learning. Teaching and learning are correlative processes. Unless the pupil learns *because of* what the teacher does, there has been no real teaching. As old David Stow used to bore his young students by reiterating in season and out of season: "A thing is not given till it is taken; a

lesson is not taught till it is learnt." There must be a causal relation between the work of the teacher and the learning of the pupil. The business of the class-room must be carried on as a partnership, in which the teacher is the directing spirit and the pupil does most of the work. Naturally this does not mean that under the new schemes he is to have an easier time of it than before, but merely that in the class-room he is to take a less prominent part than under the old scheme. In order that he may have to do little overt work during the lesson hour, the teacher must make careful and sometimes laborious preparation beforehand.

All this, it is true, can again be traced back to Rousseau, whose system of negative education with its principle of " wisely losing time " really involves all that has now come to more or less clear consciousness in the minds of teachers. But we have only to consider what took place in actual school work from Rousseau's day to ours in order to realise that the present widespread recognition of this principle marks a change that may fairly justify the term New Teaching, particularly when we trace its effects on some of our school methods. In certain subjects the text-book has been dethroned in favour of the pupil's note-book. In such subjects as geometry, science, history, geography, the pupils are now often called upon to make, from the lessons given, such a set of notes as will practically serve the purposes of a text-book. No doubt this plan involves considerable preparation by the teachers, and at first sight it would almost appear as if the method involved a more prominent share than ever

for the teacher in the work of the class-hour. But since the preparation of the note-book is thrown upon the pupils, it is clear that their responsibility is greatly increased. The same principle is involved in the present revolt against bookishness. The claim is made that, wherever possible, pupils should be made to do things rather than read about them. Open-air schools, school journeys, nature study in the fields, and gardening work at school are all examples of this revolt against bookishness. But it has to be admitted that the revolt is not always intelligently conducted. There is a sense, and there are circumstances, in which the New Education stands in need of more book-work and not less.

The Boy Scout and Girl Guide movement exemplifies in a very wholesome way the modern combination of knowing and doing. For knowledge is treated as of fundamental importance, since it enables the boys to acquire an intelligent understanding of the processes in which they seek to acquire skill. Scouting is carried out entirely on the lines of the Play Way. It is essentially a game, full of make-believe that at the same time is harnessed to the practical in such a way as to lead to serious effort in order to attain a greatly desired skill. No better illustration could be found of the principle of making drudgery tolerable. For the ages at which Scouting is most popular it forms an admirable training for cultivating the social virtues, and enabling the youngsters to get a clear practical acquaintance with the duties and responsibilities of citizenship, and that without the trace of any political bias. Some of our fundamental social

problems appear to be settled by the scouts in their stride, during their periods in camp. Here indeed we have the Play Way *in excelsis*. The boys take themselves very seriously, and their life becomes for the time an ordered whole, in which all the ordinary social problems present themselves in a very practical form that demands immediate solution. Difficulties cannot be put off to a more convenient season: something must be done at once. There has to be a social system set up in such a way as to work. There must be workers and directors of work, and all their activities must be so correlated as to avoid friction, and promote harmonious activity. There is a tribal council, and there are seven positions of importance that are open to competition to all who can satisfy the council of their capacity to fill them. Each such officer has the right to use a sign before his tent, in keeping with his dignity. Six of these officers are named as follows: (i) Keeper of the Council Fire; (ii) Beater of the Tom-Tom; (iii) Tribal Totem Keeper; (iv) Keeper of the Legends; (vi) Tribal Medicine Man; (vii) Herald of the Council. One can readily understand the keen competition for such posts, but it will be noted that number v has been omitted, as I wish to call special attention to it. This officer rejoices in the name of the Keeper of the Garbage, and the fact that he ranks with the others as the holder of a place of dignity is significant.

Mr. John Hargrave, one of the most distinguished Scout Masters in the country (he is well known to scouts as *White Fox*), gives an account of the duties of the Garbage Keeper in just the same detail as

those of the other officers. These do not seem in any way attractive, but we gather from the context [1] that there is no difficulty in filling the post. The sign of this Keeper is a heart into which are darting five streaks of lightning. The symbolism is not quite clear till we are told that this is the sign of health. One would have thought that here there was poaching on the domain of the Medicine Man, but the latter has to be content with a shield enclosing the Geneva Cross. One admires the tact underlying this elevating symbolism, and from what I can gather from Scout Masters a very serious trouble is thus eased, if not removed. I am told that for the complete solution of the garbage problem, the military parallel has to be utilised. The fact that the disposal of garbage is of first importance in a real soldiers' camp reconciles the boys to this disagreeable, but, in scout public opinion, not undignified work. Under scout law the problem of the golden dustman has been solved.

So alluring is camp life, and so full of promise of health and physical strength, that Mr. Hargrave would like to make it permanent. If he had his way all the boys of the country would live always in camp, under canvas during the summer months and in huts during the winter. His scheme is not limited to boys; he would extend it to young men and women, and even would suggest that married men and their families might do worse than join in the movement, naturally under easier conditions than those imposed on the youngsters.

These proposals take us out of the region of

[1] *The Great War Brings it Home*, pp. 175 ff.

practical education so soon as they pass beyond the scout age, but are interesting as illustrating the wide range of the spirit underlying the Play Way. Further, the above extravagant proposals give a much-needed opportunity for the good-old-grinders to let off steam. For we who have leanings towards the Play Way, and all that it implies, must have some consideration for those who hold so staunchly by the old plans. We must let them explode now and again, and we must keep an open mind to take note of their objections. They have a good deal to say in favour of their views, and nowhere are they more dangerous than when they make themselves disagreeable by maintaining that this cry for interest is really a pandering to the innate selfishness of human nature. Instead of mortifying the flesh in the time-honoured way, the primrose-pather is accused of truckling to plain human selfishness. To be perfectly candid, there is a sense in which the charge is literally true. The boy who follows the line of his interest is certainly following the line that his self would dictate. If we now consult our psycho-analytical friends about this self we find it such a cesspool that we are unwilling to have anything to do with it, and feel inclined to join the good-old-grinders in doing everything we can to repress it. If one reads *The Beloved Ego* by Dr. Wilhelm Stekel, one is inclined to think that what this ego needs is the firmest possible repression. But fortunately we need not take our view of the nature of the ego from a Vienna psychotherapist. We need not attach much importance to the opinions of a man who writes, seemingly in all earnestness :

" The sight of a cheerful gathering of people—chatting, exchanging mutual confidences and friendly words of appreciation and congratulation, apparently in pure enjoyment and friendship—calls a very different vision before *me*. I see these people as they really are: mocking, envying, and full of ill-will towards each other. It is the ' inner man ' that I see."[1]

This is very depressing, but it is certainly not new. The sort of thing has been done before, and better done. Swift was in the field before Stekel was heard of. Nor is it true. Human nature no doubt stands in need of all the defence it can find, but in the last resort it is not so hideous as pictures of this sort would make out. Besides, in education we have the comparatively untarnished ego to work with. For whatever truth underlies such pictures of adult life as Stekel draws, we must feel ourselves as educators to some extent responsible.

But in dealing with this question of interest and selfishness we are apt to be misled, as in so many other matters, by the influence of words. The child is certainly born into the world with a fierce ego-centric bias. He regards everything from his own standpoint. He is the centre of the universe. Even we who have grown up cannot get away from that position. However modest we may be, however much we may desire to keep out of the limelight, the fact remains that we must of necessity look at things as if we were the centre of the universe. Philosophically we *are* each the centre of the universe, and can think only on that understanding. But this does not carry with it the imputation usually conveyed by the word self-ishness. We

[1] W. Stekel, *The Disguises of Love*, p. 1.

may be ego-centric and yet treat all other egos with justice and consideration. The crowd that Stekel describes are not merely ego-centric, they are malicious. Ego-centricism, so far from being a drawback, is an advantage. It gives stability to our social structure. The vigorous self-reference of a child at school is really Nature's protection against society in general, and the teacher in particular. Had we teachers our way, our pupils would be all eminently pliable, and would allow themselves to be turned into whatever form it pleased us to impose. But provided with this innate ego-centric force they offer resistance to our influence and thus avoid what Mr. Edmond Holmes would call the Nemesis of Docility.

No doubt the teacher can affect the pupils and modify their development, but he can do it only on the understanding that he respects their inner nature. He can command only by obeying the laws of the child's own nature. He must stoop to conquer.

When the teacher seeks to interest his pupils, he is merely searching for the best way of appealing to the laws of their nature. So far from surrendering his power of influencing the child, he is using the only means by which he can exercise effective control over the pupil's mental processes. It is by manipulating interest that the good-old-grinders themselves exercise whatever powers they do possess. The pupil learns Latin not because he wants to, but because he is interested—in the cane, or in some other disagreeable consequence of neglecting Latin. There is no question of getting rid

of interest: that cannot be done. The practical point is the kind of interest and the way in which it is applied. It may be said that the primrose-pathers have also to use coercive measures on occasion, and the charge must be allowed. If we cannot get a response to our appeal to one interest, we must try another, even if that other be a lower one. The good-old-grinder is not necessarily addicted to the cane. He is severe, no doubt, but he may attain his ends without falling back upon the grosser form of punishment. Where he differs from the primrose-pather is in the incidence of the interest he arouses. In the primrose path the pupil is induced to take an interest in the subject itself and its applications. Those who are kept at the good old grind are interested to avoid unpleasant consequences, and therefore do the work required.

Ultimately, however, the two plans merge to some extent, for unless nisic attention is immediately supported by anisic, distraction inevitably follows. Experimental psychologists tell us that pure nisic attention can be sustained for only a few seconds at a time. Will can direct attention to this object or to that; but unless a certain amount of interest is roused in the object itself, attention must immediately flag. The good-old-grinder's order to attend is sufficient to direct the pupil's nisic attention to the subject, say Latin; but unless an interest of some sort is roused in Latin itself, the attention inevitably wanders. Fortunately human beings are so constituted that when the mind is firmly turned in any direction it

readily finds elements that rouse some anisic attention. In this way, by an excessive expenditure of effort, the pupil of the good-old-grinder manages to attend well enough to master the particular bit of work set. But there is point in Tranio's protest, "No profit grows where is no pleasure ta'en," though even the primrose-pathers would hardly go the length of endorsing the consequent recommendation: "In brief, sir, study what you most affect."

This advice raises the whole question of the pupil's choice of subjects. The problem is whether he should have a prescribed course set out before him, or should be allowed to select his own subjects. The matter has been put with a certain grim humour, Shall education be *à la carte* or *table d'hôte*? The practical answer of progressive teachers is that it should be both. In order that the pupil may work with zest, that he may be able to face his studies in the Play Way, it is essential that he should be allowed to choose subjects that really appeal to him. On the other hand, in order that his education may not be lopsided, he must not be allowed to omit the whole of certain groups of subjects. The difficulty may be met, to continue the metaphor, by making education *table d'hôte* so far as the courses are concerned, but *à la carte* with regard to the choice within each course. In this way each pupil will be ensured a sufficiently wide range of subjects, and yet within that range be able to exercise his individual preference. The workaday puzzle that is continually facing the teacher here is whether a pupil who is really bad at a subject should

be allowed to drop it in favour of one at which he can do satisfactory work. This seems a reasonable enough concession till the point is raised that since he dislikes this subject he will never look at it after school days are over, and that therefore, if he is to have any acquaintance with it at all, he ought to be kept at it while under tutelage. By allowing a choice within groups, we give the pupil the chance of selecting the particular subject of a distasteful group of studies that is least repellent, and of thus acquiring a fairly well-balanced circle of knowledge. What happens in individual lessons happens on the wider scale of the whole curriculum. By forcing himself to attend to a rather distasteful subject in which he has little primitive interest, the pupil puts himself in a position where interest will slowly gather round the unattractive subject, and in the end he will have a sufficient store of anisic attention at his disposal to carry on his studies in this undesired branch without an altogether unjustifiable outlay of effort, but he should not be called on to carry an uncongenial subject to any high stage.

It may be some comfort to the good-old-grinders to note that the status and application of interest have undergone a change since the Herbartians took it in hand. Up to the time of this philosopher, interest was regarded among educators as a means. Pupils had to be interested in their work in order that it might be properly done. Interest in the work itself was the best kind, but if that were not available the next best thing was interest in something closely connected with the subject to be studied. But Herbart raised interest to a higher

place, and made it not merely a means, but an end. It had to fulfil its old function as a driving force in the actual process of learning, but at the same time it began to attain a place as the goal towards which the whole educative process was tending. Many-sided interest became the ultimate aim of education. The truly well-educated man is regarded as the man who is sensitive to a wide circle of appeals from life. These appeals may not be all towards good. For many-sided interest may include evil as well. The truly educated man is sensitive to all the available stimuli, good or bad, though of course he responds in a different way to each stimulus according to its intrinsic value, and to the bias given by moral training.

This many-sided interest is cultivated indirectly by working out a broad curriculum in a new way. But the New Education is not content to leave the cultivation of sensitiveness to the chances of by-education. One of its characteristic features is the Appreciation Lesson. Here we have a deliberate attempt to help young people to appreciate certain forms of art. Many teachers are suspicious of this witting effort to make pupils enjoy artistic presentations. They are inclined to believe that such enjoyment will either come naturally from the exercise of the art by the pupils themselves, or will not come at all. In particular it is feared that a certain element of priggishness will be introduced into school work by this direct appeal to the emotions of the pupils. To make pupils appreciate music, teach them to play on some instrument or to sing ; to make them enjoy paintings, teach them

to draw and to paint. Merely to tell them to enjoy this piece of music or this fine picture is to court failure by an artificial approach that is likely to result in æsthetic hypocrisy. But the new method is not so crude as all that. The main point is not so much to tell children what they should appreciate, as to present to them material that is worthy of their admiration, under circumstances that give the worthy objects the best chance of making a successful appeal. Instead of depending for inspiration on the notes that can be drawn by their own efforts from piano or violin, the pupils are brought into contact with excellent performers at work. Appreciation, thus stimulated, often works in two ways: the pupils enjoy more or less passively, but they are also stirred to do better as executants. But even in the case of those who have neither desire nor talent for execution, much has been gained when they are led to appreciate the artistic expression of others.

The forces of imitation and suggestion no doubt count for much here as elsewhere in school work. The fact that the teacher is obviously enjoying the poem that he reads to the class has a great deal to do with the chances that the pupils will enjoy it in their turn, and that without the slightest unwholesomeness in the way of hypocrisy or priggishness. No doubt the pupils should be encouraged to express themselves actively, as far as possible, in all the available artistic directions, for, combining as it does the active with the passive sides, the Appreciation Lesson offers an excellent example of the application of the Play Way.

CHAPTER X

THE PROJECT METHOD

ONE of the most characteristic of modern tendencies in school method is the general recognition of the purposive element. There is a very wide acceptance of the view that pupils should always have a clear idea of why they do certain things in school. No longer can a reactionary teacher claim that the fact that he so wills it is a sufficient reason for a pupil studying any subject or any part of a subject. There is, no doubt, still a place for certain " drills " in the more mechanical parts of the instrumental subjects, but even those drills have their purpose explained to the pupils. When it comes to problems we are in a familiar region. Pupils have been for long accustomed to deal with practical applications of the principles they have learnt. The clever boys like problems; the dull boys detest them. But neither clever nor dull boys used to pay much attention to the content of the problem. It was regarded as a school exercise, and as something quite apart from anything having to do with real life. Especially in Arithmetic were problems set producing results that were laughably out of keeping with the realities of life. Salmon were sold at prices that roused the scorn of boys

who knew the state of the fish-market; walls three feet thick, twenty feet high, and thirty feet long could be built in a few minutes if only a sufficient number of men were set out in the conditions of the problem; many things could be done exactly only on the condition that a certain fraction of a man could be made to do its fair share of the work. The gradual introduction of the human element into school work, technically known as socialisation, made teachers as well as pupils critical of the problems that ran counter to common sense.[1]

Problems began to be set that involved some little research, as well as the application of arithmetical principles. A boy would be asked such a question as "If you were offered £10,000 in gold on condition that you carried it home with you from the bank to-day, would you be any the richer to-night." At such a problem the boy's eye gleams: he actually wants to know. Since it was given before the war, the teacher was in a position to let the boys have the use of a few gold coins and a letter balance. A moment or two was enough to find that three sovereigns plus a half-sovereign weigh almost exactly an ounce. Dividing 10,000 by $3\frac{1}{2}$—for once fractions seemed to have some use—gave 2857·1 oz., after which a division by 16 produced the result of 178·1 lb. The problem remained to determine whether this was a weight within the carrying power of the class. The consequent

[1] Not in comic papers only, but in real, sober, irritating school life teachers sometimes receive letters from trade-union parents objecting to problems involving men "working ten hours a day."

experiments produced varying results in the case of the different boys, but the depressing conclusion became clear that none of them were likely to become rich quickly, even if they got such a gaudy offer. One result of the working out of the problem was that the master raised his offer to £20,000 with his next class, as the resulting doubt with some of the stronger boys was unsettling, and led to endless discussion and some boasting. No doubt discussion is good, but it ought to be capable at this stage of definite and conclusive settlement. For example, the boy who made the following slip was readily made to see and acknowledge his error. Though he was one of the best arithmeticians in the class, he showed how easy it is to go off the straight, if one merely sticks to school-room tradition. Because gold is measured by Troy weight he divided by twelve instead of by sixteen, overlooking the fact that though gold is sold by Troy weight it is carried by avoirdupois.

It will be noted that the problem was a fair one, and involved no " catch." No one was more surprised than the teacher at the snare into which over-ingenuity had led the clever pupil. " Which would you rather have: a half-hundredweight of whole sovereigns or a whole hundredweight of half-sovereigns ? " is not a problem in the proper sense of that word: it is a pitfall. What is wanted for school purposes can be best illustrated by a plain statement of a definite end to be attained, leaving to the pupils the discovery of means to attain it. For example, the problem may be set: " How long would it take you (that is you, John Smith, or

whatever your name is, not a boy in general) to walk from London to Aberdeen?" The boys at once want to know the distance between the two cities, and often make the blunder of finding that distance by means of the scales on their maps. It is necessary to make them realise that this is the distance "as the crow flies," and that they are not crows. By reference to the "ABC" railway time-table it is found that the distance by rail is 522¾ miles—a somewhat longer distance than the crow-flying one. The boys are induced to make a certain addition even to this, on account of the greater crookedness of road as compared with railway lines, and come to the conclusion that 600 miles will be a not unreasonable estimate of what must be walked between the two cities. Then experiments have to be made to discover how many miles can be walked in an hour, and investigations into the number of hours per day that such a rate could be kept up. The boys are usually remarkably optimistic in their estimate of their powers, and the teacher has to recall to them their state of fatigue after a ten-, fifteen-, or twenty-mile walk. In the end, a rough-and-ready idea of how long the expedition would take is attained, and in the process much incidental information has been acquired.

It is obvious that in all such problems there remains a strong element of the theoretical. The pupils' interest is still largely scholastic. There is not a sufficiently serviceable bridge between the school world and the outside world. Even yet, round the word *problem* there clings a fringe of the scholastic, a suggestion of the intellectual rather

than the practical. All the same, problems like the above do indicate a stretching out towards the real everyday world, and the Americans have been quick to see the possibilities of developing the underlying idea. They have, in fact, elaborated a new method, and in order to keep it free from the taint of pure intellectualism that is associated with the problem, they have invented a new name, and called it the Project Method. It is not that there was any special lack of methods at the time when this new one was floated. In fact, a careful survey of forty-two text-books, covering among them such subjects as mathematics, languages, science, geography, brought out the fact that no fewer than fourteen methods of teaching were found

" with sufficient frequency to warrant the statement that they comprise those now in most common use. The methods noted are : questions, topics, problems, examples, originals, exercises, drills, tests, reviews, applications, illustrations, demonstrations, experiments, and practicums." [1]

Most of these terms are intelligible to English readers, but two of them may need a little elucidation—*originals* and *practicums*. The first appears to be confined to geometry, in which it stands for the bald statement of a theorem, where the proof and sometimes the construction is left to the pupil, instead of both being supplied as was the case under the Euclidean scheme. The term " original " therefore is not one that requires much consideration. The " practicum " is of more importance, and is one of the most recent developments in the nomen-

[1] J. A. Stevenson, *The Project Method of Teaching*, p. 22.

clature of method. I cannot find anywhere a detailed definition of the term, but it is not difficult to gather its meaning from its use. It appears to indicate any way in which principles can be applied to practical affairs. Thus, when our pupils are in the lecture room getting a lesson in chemistry they are acquiring principles: when they pass into the laboratory, they are entering on a practicum. Measuring a field, and finding the width of a river by means of trigonometry, are mathematical practicums. Translating in the History class a document in mediæval Latin may be regarded as a classical practicum. Stress is laid on the usefulness of the thing to be done, and on the interest it excites in the pupil doing it.

If there is no available definition of "practicum," there is a plethora of definitions of "project" as found in an educational setting. Dr. Stevenson gives a very succinct statement that may well serve for a text: "A project is a problematic act carried to completion in its natural setting." He points out that in the project what one *does* is the prominent thing.[1] No doubt principles are involved, but they are not put in the forefront. In illustration, W. W. Charters is quoted:

> "In the topical organisation principles are learned first, while in the project, the problems are proposed which demand in the solution the development of principles by the learner as needed."

Obviously a contrast is here implied between the practicum and the project, in which the practicum

[1] *Op. cit.*, p. 43.

ranks along with the problem as a process in which the principles are first communicated or acquired and then applied, while in the project the discovery of the necessary principles is a condition precedent to a successful tackling of a situation. But the fundamental difference between the problem and the project lies in the tail of Dr. Stevenson's definition " in its natural setting." This takes us at once beyond the school area altogether, right into the outside world. It is not enough to work out neat little problems in the school laboratory, and bring the results to bear on the needs of the home. The whole project has to be worked out beyond the school walls. The situation to be faced has first to be found, and then the means sought by which the desired result may be achieved.

Now all this is very encouraging to the practical person, and to employers who write letters to the newspapers urging schoolmasters to teach their pupils something useful, but teachers will read it with lowering brows. They have been accustomed to think that their business is to instil principles into their pupils, and see that they learn to apply them in an intelligent way. But this new scheme claims that the pupils have to evolve the principles for themselves, and further that this evolution is to take place outside the school altogether. Those whom the Americans call the " proponents " of the Project Method have little comfort to offer the distressed schoolmaster. Indeed they go out of their way to explain that it is time that he should wake up out of his philosophic slumbers and " get a move on." They explain that everybody in the

world but schoolmasters follow the Project Method as a matter of course, but that these content themselves with theorising about and over-systematising everything, so that no real progress can ever be made. We are said to be content with our mill-horse round, and initiative is not in us.

The teacher with open mind and humble heart may be constrained to admit that perhaps there is some truth in this general indictment, but all the same he cannot get rid of the conviction that a certain minimum of system should be introduced into his teaching work. A great deal of what may be called interstitial learning may go on both in school hours and beyond them, but most teachers feel that it is an essential part of their duty to see that some sort of order dominates the whole process of directing education. To this extent at least they agree with the integralists, and are disinclined to buy the advantages of the Project Method at the price of forfeiting this minimum of system. Even the proponents in their saner moments acknowledge the necessity for this fundamental systematisation, for they admit that the Method should be supplemented by some sort of organisation of knowledge. We are told that the systematic or logical aspect has its place, and through attention to it the pupil will be supplied with additional clues to aid him in prosecuting his enquiries. One of the dangers of the Method is that it is apt to get principles tied up in a small number of concrete examples, each valuable in itself, but the whole needing expansion and generalisation if the pupil is to acquire the freedom of application that true

education should give. All this, it is true, is not quite consistent with what we have just read about the place of principles in relation to projects. But with a growing organisation like this new Method, we must be prepared for a certain amount of inconsistency, if we compare the statements of different workers in the field of exploration. After all, a little inconsistency does not greatly matter. The important point is that those interested in the new development are thinking as they go along. Dr. Stevenson quotes with approval a hopeful view expressed by Mr. C. R. Mann in *A Study of Engineering Education* [1]:

"Although the suggestion that an efficient course can be constructed as a series of apparently disconnected projects comes as a shock to those who have grown up with logically rigorous courses, the value of the enthusiasm engendered by well-chosen projects must not be overlooked. Our most valuable information and training come from working out projects that are really worth while; and if this method works in life, why not in school? especially, since in educational institutions it is always possible to organise significant projects into a connected series that leaves a well-developed conception of the whole subject in the student's mind."

Mr. Mann certainly acknowledges handsomely the need for a systematic view or a complete conception of a study as a whole, yet the ordinary professional teacher cannot but regard the above quotation as unduly optimistic. We may admit all the invigorating power of the interest roused by

[1] *The Carnegie Foundation for the Advancement of Education*, p. 62.

practical applications to things worth while. But difficulties do not disappear as a result of the airy rhetoric of the passage: "Why not in school? forsooth!" The English teacher could give a crushing answer in one word—Examinations. We have already dealt with the devastating influence of the external examination, so there is no need to labour the point here. But even if we enjoyed the less examination-ridden conditions of the United States, our teachers would still regard with some suspicion this proposed plan. The most obvious objection will naturally be the disturbance of the whole school organisation as far as the curriculum is concerned. To be sure our English attitude towards the curriculum is not so wise as it might be. It has been a standard complaint for many years that we are inclined to treat our subjects on what it is popular to call "the water-tight compartment system" under which each branch of study is kept rigidly in its place on the time-table, and each specialist makes a point of strictly minding his own business, and of resenting interference by incursions of other teachers into his domain.

To get rid of this unwholesome isolation, the scheme of correlation was introduced, by which each subject was deliberately brought into touch with others more or less cognate, and teachers were invited to co-operate with one another to organise their courses in such a way that the pupils could be led to see the interdependence of the various subjects. The aim of the reformers was excellent, and the execution sometimes resulted in success, but there was a tendency to go to extremes, and

sometimes the curriculum got into a state of inextricable confusion. All the subjects got mixed up in a general jumble. Everybody was so busy correlating everything to everything else, that nobody found time to deal with fresh and independent matter. The inevitable reaction accordingly set in with some severity, and specialists became more than before determined to keep to their own domain. It is significant when a writer on the teaching of history, for example, feels it necessary to remark that " the business of a History teacher is to teach History."

This being the present state of opinion among teachers, it is not remarkable that they look askance at a method that would once more throw all the subjects into a common pool. The Projectors, as we may be permitted to call the advocates of the new method, protest that, so far from weakening the interest in special subjects as such, it will so strengthen the interest in school work in general as to lead to greater attention being paid to the special subjects. Matters that are usually regarded as having no practical importance apart from the school, will be seen to be capable of direct and useful application to outside things that are full of practical interest.

The introduction of the idea of purpose into our school work is certainly to be encouraged ; if the plan can justify its claim that it will not interfere with the systematic work of the school, it will no doubt be successful in its demand for recognition. But the practical teacher cannot regard with equanimity the proposal to introduce what are called big

projects into the school course. He can admit the value of the small project, leading, for example, to a boy's undertaking to build a rabbit hutch, or to instal an electric bell system into his home, and he can see how the school studies may be worked in to help in such a scheme. If, for example, a boy forms the project of making a balloon big enough to carry his weight, it is obvious that he will need the help of quite a number of his school subjects before he can cut out his material and provide the necessary gas. Further, such schemes fit into the Stevensonian definition. They can be carried to completion, and that in their proper setting. But when it comes to large projects such as those suggested by Professor Charles A. McMurry, we get a little out of our depth. He is inclined to treat the project retrospectively or historically, rather than as a project in the living present. The Virginia Plantation was no doubt a living project at one time, and so was the Salt River irrigation scheme. But they are now finished with, and form a part of history. To deal with them is to deal with mummified projects, which after all may be no bad thing. Certainly Dr. McMurry shows how these can be made into excellent material for school use, illustrating a great many principles that are of high educational value. English teachers will indeed be more likely to accept the McMurry material than the Stevensonian, for the earlier writer (McMurry) makes a less violent attack on the established order of things. After all, mummies are more amenable to treatment than living bodies, and the tracing out of an old project—with the

interpolation of practical problems by an intelligent teacher throughout the process—can be made a very effective way of giving point to school studies. Indeed the basis of the McMurry scheme is the *big unit of study* which he believes to be the best corrective of our present fragmentary accumulations of knowledge.

There is something very attractive in the idea of a school staff sitting down in the common room to make a plan of campaign by which each of the specialists will undertake to give such a bias to the presentation of his specialty as will supply just the information necessary to carry on a big project such as the building of the Panama Canal. But difficulties at once arise. It is not at all likely that the pupils will be doing during that term in each subject just the sort of things that are needed for the purposes of the project. No doubt arrangements could be made in advance, for the " big unit " would certainly be selected well ahead of the time at which the project was to be set on foot. In this way the physics curriculum could be modelled to suit the coming requirements, as could also those of Geography, History, Mathematics, Nature Study, and others concerned. But most specialists would violently resent this dictating of the order in which the elements of their subject are to be presented. There will arise, in fact, in an acute form, the familiar quarrel between the supporters of the logical method and the supporters of the psychological. The ordinary specialist has a strong preference for the logical form of presentation. He likes to sit down and map out the order of presentation of the various

points from the standpoint of clear logical sequence. If he be a trained teacher, or one who has made a study of the growing mind, he may feel called upon to modify his neat logical arrangement to meet the needs of the immature minds of his pupils. But if he is asked *in addition* to introduce changes of order so as to make it possible that a certain piece of external work may be completed at a certain fixed time, he is apt to get a little irritated, and he may even say that his problem has passed from the stage of mere difficulty to that of impossibility, since he is now asked to combine in one process three forces that have no organic connection with each other.

At this point the Projector will be at hand to point out that after all the specialist has still only two fundamental forces to deal with—the logical demands of the subject and the psychological demands of the pupils. For the conditions imposed by the project are really included in the conditions that determine the psychological demands of the pupils, and it is because this is so that the project has any educational value. Further, the new demands bring with them more than their own compensation, for the pupils will now come to their special subjects with highly increased interest, as they expect to get certain pieces of definite information of which they stand in need. Instead of passively imbibing certain abstractions they eagerly call for needed help. Projectors are fond of pointing out how valueless unappliable knowledge is : " abortive " is their favourite adjective here. The characteristic of the Project Method is that it gives

life to all the knowledge that it calls forth. Following this method the teacher does not first impart knowledge and then seek for some way of making it useful: he begins with the use and searches for the knowledge.

The practical teacher, fond of system, argues that this is excellent so far as it goes, but wants to know what is to become of the organisation of the subject. No doubt if a sufficient number of radically different projects were undertaken, and a long enough period spent over each, it would be possible in the ultimate resort to include all the essential parts of the subject. But time would fail, to cover the subject in this way. Certain branches in mathematics, for example, might thus never come under the pupil's notice at all.

We are here faced with the problem of the random in teaching. Even in the best-regulated course of instruction there is a certain range within which we fall back upon the random. Our illustrations often belong to this region. In giving examples of the working of a general principle it is often highly desirable to make your selection at random, in order that you may get sufficient variety. At the beginning of a piece of exposition, no doubt, it is clearly necessary to have all your illustrations carefully selected and ready to be brought in at the right moment. But when the position has been made tolerably clear by well-selected examples, the pupil should have the advantage of some taken at random. In getting a pupil to work up towards a general rule, no doubt the first examples should be deliberately chosen so as to point in the direction we want our pupil's mind to take; but at the later or testing

stages, the random again comes into its own. But even if we admit that there is a place for the random in ordinary teaching, the orderly minded teacher will find it very hard to admit that this place is anywhere but at the illustrative stage. He has always been told that his matter must be presented in a certain definite order, any deviation from which is an error. Further, he is particularly alive to the danger of omissions if a subject is not approached in an orderly way. To depend upon a subject being taught *en passant* while working out a series of problems, seems a tempting of providence in the way of leaving gaps in the pupil's knowledge. But gaps can after all be filled at a later stage if they are found to be important enough to deserve filling. For it has to be remembered that if in the working out of quite a number of projects certain elements in a particular subject have not been touched, it is an indication that these omitted elements are not of the first importance, though of course this conclusion is not logically valid, and merely expresses a probability.

The Projectors have a still better card to play by indicating that there is something to be said positively in favour of the direct practical and apparently unsystematic approach. The logical arrangement of a subject is something to be reached rather than something from which a process can begin: it is a goal rather than a starting-point. Besides, the logical conception of the subject as a whole may exist in the teacher's mind, and yet be quite unsuitable for the pupil's mind, till sufficient material has been acquired. The methodical and logical teacher

can quite well keep account of all the gaps that are left in the orderly presentation of his subject, and make sure that at the appropriate moment this gap shall be filled, and its content explained in relation to the matter which had been picked up in the irregular way involved in learning by the project method.

It must be conceded that it is a big demand on the patience of a tidy-minded person to ask him to allow the minds of his pupils to get filled up in the haphazard way that goes along with the Project Method. But in the struggle between the pupil and the subject for the teacher's interest and sympathy, it is now generally admitted that it is the pupil who ought to win. The goal of the educative process is the harmonious blending of the knowing mind and the known matter, and it must never be forgotten that the mind is a unifying influence. Whatever the mind seizes it assimilates, which is only another way of saying that the mind makes acquired knowledge a part of itself. In a literal sense it is of course impossible for what is material to become mental, but there is a useful practical truth wrapped up in the phrase that " fact becomes faculty." This is only a graphic way of saying that whatever the mind works upon it makes a part of itself, and to that extent the mind is slightly different from what it was before. The boy who has learnt the multiplication table is to that extent a different boy from what he was before. Accordingly, a boy who is working out a project is by that very fact changing his nature to a greater or less extent. What worries the anxious

and methodical teacher is whether changes produced in the irregular way that accompanies the working out of a project will necessarily result in an ill-regulated mind. We are probably too apt to underestimate the organising tendency of the mind itself, and to think there must be confusion within because there has been a somewhat promiscuous presentation from without.

When all is said, however, we cannot expect an experienced methodical teacher to accept without protest a plan that seems to cut right across the ordinary curriculum. The American Projectors are ready with their answers to this objection, as thus: (i) it does not necessarily cut across the curriculum; (ii) if it did, so much the worse for the curriculum. Without doubt our traditional course of study has got stereotyped, and, further, whatever changes do take place are all in the way of additions. Everybody seems eager to add something to the curriculum: few appear to suggest that anything should be removed. It may not be a bad service that the Projectors do by raising the whole question, and demanding a re-examination from a new point of view of the content of our education course. It may be, as Dr. Dewey assures us, that "the child and the curriculum are simply two limits which define a single process," but it is hard to get practical English teachers to adopt a revolutionary process on the strength of such a generalisation.

Much more likely to succeed is Professor Stevenson's approach from the practical side, when in the last chapter of his book,[1] he shows how the method

[1] *The Project Method of Teaching*, p. 192.

can be actually applied to the different subjects forming a part of our present curriculum. When the teacher sees how a dozen real academic subjects can be treated on the new plan, he is willing to look seriously into the matter. Dr. Stevenson is true to his own definition, and develops real projects, that are both brought to completion and carried on in their natural environment. It is doubtful, however, whether his methods would be altogether popular among English officials and business men. For the subject of English is here socialised with a vengeance. It appears that in the schools where Dr. Stevenson's students did their practice work in 1919, there was a week set apart for propaganda in favour of improved English in the school. It is called *Better English Week.* The opportunity was taken of making this a project, and the children were called upon to take a practical part in the movement. They made personal calls on business people in the town to discover what they wanted from the schools in the way of preparation in English, then they wrote letters broadcast to officials and business people asking what qualities they specially desired in young people seeking appointments, and whether English bulked large in their eyes. Other practical methods were adopted, such as printing and exposing posters, inventing "slogans" in favour of Good English, urging greater attention to English, discovering the most common mistakes in English (culled from both teachers and pupils) and making them prominent on the blackboard. English seems rather a favourite subject for Project treatment across the water, for

there is a whole book [1] published on the subject by Mr. Wilbur Hatfield, in which, however, the appeal is more to the private pupil than to the member of a class, though it can be used by both. All manner of situations are suggested in which it is necessary to use English, and indications given of how to carry out the individual project. Dr. Stevenson's work will be found more convincing to English teachers, because in his final chapter he gives excellent indications how the method can be applied to the existing curriculum.

American teachers, however, do not seem to be in a mood to pay too much attention to the curriculum as it stands. They have the idea that after all the curriculum exists for the child, not the child for the curriculum. They are highly paidocentric in this matter, and believe that there is nothing sacrosanct about the present content of school subjects. Their idea is to bring the youngsters into as close touch as possible with the ordinary affairs of life. Accordingly, they are more inclined to plan out project schemes that will evolve a curriculum than schemes that will fit into what at present exists. The grip the Method has taken of the imagination of the American public may be estimated by the fact that there exists now a *School Project Series*, under the editorship of Dean W. F. Russell of Iowa, with three volumes already published, the third being very apposite here.[2] It is by Miss M. E. Wells, and has the significant title,

[1] *Business English Projects.*

[2] The other two are *Projects in the Primary Grades* and *The Redirection of High School Instruction.*

A Project Curriculum: dealing with the Project as a Means of Organising the Curriculum of the Elementary School. Here we have an elaborate treatise in which the author deliberately sets out to organise an elementary school curriculum based on various big projects. She does not accept the true Stevensonian doctrine, for her projects are not carried to completion in their natural setting. They consist rather of parallels to real outside life than to that life itself, a sort of real life at the second remove.

Miss Wells boldly adopts the Play Way, though she does not appear to be acquainted with Mr. Caldwell Cook's work. Each of her major projects is based on a form of play that brings the youngsters into close touch with the realities of life. The introductory project consists in playing at holding a fair, which is quite apposite, since it appears that they have an annual fair at Trenton, New Jersey, where Miss Wells' Normal School is situated. The other major projects are for Grade One *Playing Families*, for Grade Two, *Playing Store*, for Grade Three, *Playing City*. It is clear that here we have abundant opportunity of socialising the academic elements of the school course, and Miss Wells works out with much ingenuity the application of the various subjects to the needs of the absorbing projects that make an almost irresistible appeal to the three lower grades. Having worked out in full the application of the method to the first three grades, Miss Wells contents herself with a general outline of the work for the next three grades, and then proceeds to give a very elaborate account of the principles underlying the curriculum she has

evolved, and to make theoretical applications to possible practice.

English readers are likely to remain unconvinced of the practicability of the Method as applied in the *higher* classes in school. At the lower levels it seems not unreasonable that the ordinary school subjects should thus be taken in the stride of problem-solving ; but when the curriculum becomes more elaborate, it seems necessary to devote definite attention to each subject as an organic whole. No doubt we keep our subjects too rigorously apart as things stand, and the proposed method will do something to develop a better understanding of the interrelations of the various branches of knowledge. But this advantage can be secured by a very partial adoption of the Method of Projects, and it is very doubtful how far we can ever accept the pure Stevensonian doctrine of " natural setting." No doubt the decay of bookishness will make it easier to move in the direction of this Project orthodoxy. In all probability it may be possible to adopt one big (but not too big) project each term and to carry it out on Stevensonian lines. This will be enough to secure all the good the Method can offer, and this concession is probably as much as even our most open-minded British teachers are at present likely to make. All the same, it is quite evident that the Method is directly in the line of current progress, and fits in very comfortably with the other developments.

CHAPTER XI

PSYCHO-ANALYSIS IN EDUCATION

IN a book concerned primarily with practical developments in education it is perhaps necessary to justify the inclusion of a chapter on psycho-analysis. But an excellent case is easily made out. Not only is psycho-analysis one of the most widely discussed subjects of the day, but it is having a very direct bearing on educational ideas and is thus exercising an influence on the work of the schools. In the extensive literature on the subject we find continual references to education. Turning, for example, to the first book of the kind that I happen to take up, Mr. J. C. Flügel's *The Psycho-analytic Study of the Family*, I find no fewer than eight references to education in the index, two of them followed by the *ff.* that indicates more than perfunctory treatment. The psycho-analysts themselves evidently look to education as one of the most likely departments for the exercise of their functions, as the following will show:

"A new science and application of pedagogy are being reared upon the data obtained by psycho-analysis, as witness the masterly work of Pfister recently published and made the forerunner of an important series of works on pedagogy under the leadership of Meumann and Messmer." [1]

[1] Jeliffe, *The Technique of Psycho-analysis* (1918), p. viii; quoted by Knight Dunlap.

That the new views are taken seriously by educational reformers may be seen from the following quotation from Mr. Norman MacMunn :

" The believers in a great extension of freedom for the child owe much gratitude to the new study of psycho-analysis. Not only have the evils of repression been traced and relieved by the removal in the clinic of the very suppressions which nearly all the old-time, and many of the present-time, schoolmasters have considered it their duty to encompass, but we are probably on the eve of discoveries which will help to provide a rational analytic technique which can be passed on for the use of the teacher." [1]

It is not surprising that the psycho-analysts should turn to education, for this is the region in which all psychologies find room for hopeful application. With grown-up people there is always the feeling when studying psychology that it is too late to make the necessary applications. " If only we had known this or that fact at an earlier stage," we are apt to say, " how differently we would have acted ; but now it is too late." When we turn to education we enter a region in which there is still time for the psychologist to make practical use of the knowledge he has acquired. Too late for himself, his knowledge is still available for the young people at the school stage. The teacher is in a position to make practical use of whatever psychology has to give him. There is indeed no lack of material for the consideration of the practical teacher in connection with the newer developments of psychology. We have such books as W. Lay's *The Child's Unconscious Mind*, W. Healy's *Mental*

[1] *The Child's Path to Freedom*, p. 16.

Conflicts and Misconduct, E. Evans' *Problem of the Nervous Child*, H. H. Goddard's *Juvenile Delinquency*, all suggesting a very direct bearing on our work with the young, though it must be admitted that they have a strong bias towards the abnormal. But when we find a group of books written deliberately at the teacher's address, we feel that it is time to begin to take notice. Among these is the large book on *The Psycho-analytic Method*, published by Oskar Pfister, Pastor and Seminary Teacher at Zurich. While it confessedly deals with "analytic pedagogics" it is not quite so useful to the practical teacher as his later volume on *Psycho-analysis in the Service of Education*. Dr. Crichton Miller has recently published a workmanlike little volume on *The New Psychology and the Teacher*. But most useful of all for the practising teacher is Mr. G. H. Green's *Psychanalysis in the Class-room*, in which we have the subject brought into direct relation with everyday work by a man who is actually engaged in it. In addition to all this, psycho-analysis has been the subject of endless lectures up and down the country and a subject of debate at all manner of conferences of teachers. There is evidently a strong case for inviting the attention of the practical teacher to this new and apparently important development.

To begin with, we must note that psycho-analysis is, properly speaking, a *method*, and as such must be distinguished from the psychology on which it is based. No doubt the term as commonly used is made to cover both meanings, with the result that there is a good deal of confusion in the discussions that we hear and read. For teachers the

distinction is vital, for it is quite possible to accept the psychology, and to act upon its teachings, without having anything to do with the method. Indeed, the intelligent practical teacher who keeps abreast of educational literature, cannot but be affected by the prevailing discussion of the psychology, while in most cases he is resolute in refusing to make use of the method as that is usually described.

It is regrettable that there is no generally recognised name for the psychology on which psycho-analysis is founded. It is often loosely termed the New Psychology; but at the present day psychology has many developments that have no connection with psycho-analysis as such, and yet may fairly claim the title *new*. Collective or group psychology, for example, is quite as much entitled to the epithet as is the psychology usually associated with the names of Freud and Jung. Those who follow Jung in his break away from the Freudian school have appropriated the term *Analytical Psychology*, to which, however, they have no just claim, since it has been already pre-empted by writers who have nothing to do with the psycho-analytical position. G. F. Stout's well-known book with this title is enough to ward off a claim for the exclusive use of the adjective *analytical* by a succeeding school. Besides, the title has been used by others, notably by Lightner Witmer. Under these circumstances, it is unseemly to usurp a term that after all does not specifically mark off the Jungian position, while it tends to perpetuate the confusion between the method and the underlying principles.

The best title, though unfortunately cumbrous, is certainly the *Psychology of the Unconscious*, for this indicates precisely the point at which the psycho-analysts break away from their predecessors. Up till recent years psychology could be quite accurately described as the study of consciousness. Of late it has become fashionable to speak of it as the study of behaviour. As Professor R. S. Woodworth tells us whimsically in a footnote to his recently published *Psychology*: "First Psychology lost its soul, then it lost its mind, then it lost consciousness; it still has behavour of a kind."[1] This transition implies a new view of the whole study. Hitherto teachers of the subject had a rough-and-ready way of distinguishing between a physiological fact and a psychological one: the second fact always involved consciousness, the first did not. The old-fashioned psychologist in fact postulated the equation:

The psychological = the conscious.

The men who have developed the psycho-analytical method regard this equation with contempt, and in their writings are continually gibing at it. They hold that of the non-material processes—mental, spiritual, psychic, call them what you will—only a minute portion are present in consciousness, and that a man's actions are determined by spiritual forces of which he has no direct or immediate knowledge. There is, in fact, a great region commonly called by the new experts "the unconscious," sometimes irreverently contracted by the younger psycho-

[1] *Op. cit.*, p. 2.

analysts into the familiar " unc," where originate far more of our apparently reasoned actions than is consistent with our proud claim to rank under the heading *homo sapiens.*

The line that marks off the conscious from the unconscious part of our spiritual experience may be called the threshold of consciousness. This term is familiar to those who are acquainted with the Herbartian terminology, and as a matter of fact there is a much closer connection between the Herbartian Psychology and the Freudian than is commonly recognised. For it must not be supposed that Sigmund Freud, the now well-known Vienna mental specialist, was the first to make the plunge into the unconscious. The way was prepared for him. It is true that the pessimistic Georg von Hartmann was less of a psychologist than a philosopher, and gave little help in his *Philosophy of the Unconscious.* But Herbart and Beneke did erect signposts that could not fail to guide their successors into the realm of the unconscious. No one can study the peculiar mechanism of the ideas as they work in the Herbartian scheme without noting the close connection between his theory and that of the Freudians, though they approached the problem from the medical standpoint, while he came to it from the educational. Even the terminology is there ready made waiting for the new-comers, needing nothing but a little elaboration. The fight of the ideas for a place in consciousness is no doubt nothing more than a figure of speech, but it represents with sufficient exactness just what the psycho-analysts need for the mechanism of repression and suppression. In both

theories the point is made that only a very small portion of our potential ideas have a place at any time in our consciousness, and it is obvious that *apperception-mass* is only *complex* writ large, and without the sinister meaning Freudians now attach to the term.

The Freudians are as fond of metaphors as the Herbartians, and the iceberg is one of their favourites. It is well-known that only a small portion of the mass of an iceberg appears above the surface. It is the submerged part that corresponds to the content of the unconscious. Of the millions of ideas that experience has given us the potentiality of recalling to our consciousness, only a tiny fraction can be present in the consciousness at any one time. The remaining potential, but for the time unrealised, ideas form the submerged portion of the iceberg, and sometimes exercise an important but often unrecognised effect on the life of the person concerned. An iceberg is sometimes observed floating along in the teeth of the wind. The explanation is that there is a current underneath the surface running in a direction contrary to that of the wind; and since the mass underneath the water is much greater than that above it, the current has the advantage, and causes the apparently inexplicable movement in the teeth of the wind. So, we are told, people sometimes seem to act in a perfectly inexplicable way, since we seek for the explanation among the ideas in consciousness, whereas the dominant forces are in the unconscious.

The figure is a useful expository device, but fails in two directions. First the ratio between the

exposed and the submerged parts is ridiculously wrong. A ninth part or so of the iceberg is exposed, but only a minute fraction of the total number of potential ideas can appear in the consciousness at the same time. A still more serious discrepancy is to be found in the static nature of the relation between the two parts of the iceberg. The submerged portion remains inert, whereas some at least of the ideas that are at any given moment under the threshold of consciousness are in a state of vigorous ferment. In Herbartian phraseology certain ideas are under the dynamical threshold, which means that though they are at present in the unconscious, they are either on their way into consciousness or have just come out of it. In any case they are exercising an influence on what is going on in consciousness. It is this influence exercised by the content of the unconscious that justifies the psycho-analysts in attaching great importance to the unconscious.

They sometimes speak of the Titan within us, the figure implying that as the result of previous personal, and even racial, experience there exists in the unconscious a mass of more or less organised ideas and impulses that lead to disturbances now and again within the consciousness itself, just as the fabled Titans used to cause eruptions and earthquakes among the mountains that had been heaped upon them to keep them out of mischief. What displeases the practical teacher in this figure is the implication that the contents of the unconscious are necessarily evil. Just as the term *suggestion* is almost invariably used in a bad sense, though the process itself may be equally well used for good and

for evil, so there is a general assumption that the things we store up in the unconscious are all undesirable things. For their comfort, teachers should realise that while the unconscious contains the paid-up capital of the experience of their pupils, it includes all the good as well as all the evil effects of that experience. The trouble is that here, as elsewhere, we take the good for granted, and concentrate our attention on the evil, because of its troublesome qualities. Since psycho-analysts themselves are nearly always concerned with pathological cases, it is natural that they should pay special attention to the causes of abnormal states. Their books make painful reading. After examining a number of their cases, one gets the impression that the unconscious of our pupils is a seething mass of corruption. Even when an educational expert like Oskar Pfister deals with the subject, he tends towards the gloomy side, and neglects the cheerful, and, after all, the normal side.

It has to be admitted that we have all animal tendencies that in decent society cannot be allowed to develop. We must repress them, but this repression is not in itself an unwholesome process, and need not lead to evil consequences. We are told that repression leads to suppression, and that suppression may be unnatural and dangerous. The Titan within us may occasionally waken up and turn in his uncomfortable bed with disastrous consequences. But is it inevitable that there should be this upheaval? Is the state of suppression necessarily unwholesome? Do not the great majority of human beings go through life without any of these

violent crises? We must keep reminding ourselves that it is only the exceptional that finds its way into the sensational newspapers, and even into the case-books of mental specialists. Besides, what is the alternative to repression? If we are not to repress, are we to encourage? Sometimes in reading psycho-analytic literature one is tempted to believe that a strictly limited yielding to natural impulses might be the best way of maintaining the desired equilibrium—leading to the policy of the safety valve, and justifying the morality of sowing one's wild oats. Under all this lurks the deadly danger of using nature to justify our anti-social tendencies. Whatever is natural cannot be wrong, is a very plausible argument that tends to smooth the way of worthy but easy-going persons who want to pass from the cradle to the grave along the line of least resistance. Why should they struggle, and in particular what should they struggle against?

By whatever name it is known, there is an impelling force within each of us, a force that we all recognise though we may differ greatly in the way in which we evaluate it. Under most of its names it sounds wholesome enough: *urge*, *will-to-live*, *élan vital*, *hormé*—there is nothing to disturb us here, nothing against which we must fight. It is only when the Freudians come along with their *libido* and its sinister connotation that we begin to have our doubts. To be sure, they profess to rob it of its baser meaning and to generalise it in the direction of the force indicated by the more harmless names. But when all is said the Freudians retain sex as the principal element in the life urge, though it has to

be admitted that they give a wider than usual interpretation to sex in their descriptions of the function of the vital force. But in the last resort it is clear that sex remains the master force, and critics are perhaps justified in the sarcasm they heap on this obsession. Professor Knight Dunlap, of Johns Hopkins University, in his *Mysticism, Freudianism, and Scientific Psychology*, scoffs at the sex mania of the Freudians, suggesting that they will no doubt reduce even mathematics to a sexual basis, adding in a footnote: "The expected has happened. Since the above was written, Birdwood's *Sex Elements in the First Five Books of Euclid* has risen above the horizon." [1]

Obviously the libido in the Freudian sense must be opposed at least to the extent of moderating its full force, and it may be granted at once that the vital driving power, however described, demands guidance and restraint in some form or other. Sex itself occupies, whether we will or no, an important place in all normal lives, and has therefore to be taken into account, even by those who deny its paramount importance. Other influences, however, have also to be considered. Alfred Adler, for example, regards the vital urge as taking the form in most cases of love of power; others are in favour of the herd instinct and imitation as the ruling forces. The important point is that whatever be regarded as the ultimate source of power, it is admitted that the individual can control it to the extent of inhibiting its action at inconvenient

[1] *Op. cit.*, p. 45.

moments. The problem remains of the price to be paid for the exercise of this control.

W. H. R. Rivers makes a useful distinction between repression and suppression. When elements have been thrust out of consciousness into the unconscious so that they remain permanently in the unconscious they are said to be suppressed, whether the ejection from consciousness has been deliberate or unwitting, and whether it has been caused by ourselves or by others. On the other hand, the deliberate or witting ejection by ourselves of elements from consciousness is repression. Thus of the suppressed elements, only a portion have been ejected from consciousness by repression. It is highly desirable for all concerned that certain elements should be repressed, and it is indeed wholesome that each of us should have quite a large body of suppressed elements. Yet there appears to be always a danger that on their way to suppression some elements may get dissociated from their appropriate effective accompaniments, and this may lead to trouble. There may arise a festering among the suppressed elements that sets up unwholesome reactions in experience—fears, inordinate desires, unreasonable loves and hates, incapacity for certain activities. In face of such troubles different practitioners adopt different methods. Sigmund Freud seeks for the source of trouble in some of the earliest experiences of the patient. His glance is always turned backward to the infantile period, and generally finds some complex that owes its origin to an early sex complication. Carl G. Jung, on the other hand, is inclined to look for the cause

in something connected with current affairs, and looks for the trouble in the present. He finds that the dreams of the patient symbolise the source of the trouble, and by a correlation of the dreams with the events of ordinary life he seeks to get at the complex that is causing the disturbance. Alfred Adler for his part is inclined to project himself into the future in search of the cause of the complex. He thinks that it is fear of the future that is making the patient anxious.

From the teacher's standpoint there is a good deal to recommend Adler's view of the vital urge. He approached the subject from the physiological standpoint, and reached his psychological position through the work he had done in investigating organ inferiority. He emphasised the fact that when any organ decays or suffers injury, the rest of the system sets itself to protect the weak member, and to lighten its work as much as possible. The resulting psychological attitude is represented by the name Adler chose for his particular brand of psychology. But his name "individual psychology" has not been generally accepted, and the thing it represents has obtained little vogue. It emphasises the love of power as the characteristic of the vital urge, which, however, need not be exercised in the Tamerlane vein. More often it takes the form of dominating others by playing upon our own weakness, using it as a sort of weapon, as in the case of those who tyrannise over others by the right of invalidism. Its negative side is shown in the desire for security. It often takes the form of a desire to escape from the responsibilities of life. It leads to the desire

to be a centre of attention, and thus a love of the limelight is one of its symptoms.

Many people regard all this talk about the *élan vital* and the rest as intolerably abstract and vague. They want a scientific statement. They want more than the description of a process; they desire a knowledge of what it is that proceeds: in other words, they want to know what is the subject of the verb *proceed* in this connection. Accordingly, there are those who look with hope to the work of a new writer, Dr. Edward J. Kempf, of St. Elizabeth's Hospital, Washington, D.C., who in the *Journal of Nervous and Mental Disease*, August 1919 and January 1920, and in *Monograph* 28 of the *Nervous and Mental Disease Series*, sets out a theory of dynamic mechanism. His general position is indicated by the following statement of one of his admirers:

"In order to explain the great physiological changes which influence human thought and behavour and the biological nature of man, Kempf has developed a conception of the personality based on the reflex actions of the autonomic nervous system." [1]

But when we trace this physiologist to his lair we find a very difficult and not very convincing terminology that does not seem in the meantime to lead anywhere in particular.

After going through a great many books on psycho-analysis the reader will gather, though the principle is rarely stated with any definiteness, that we run great danger by repressing natural tendencies,

[1] André Tridon, *Psycho-analysis and Behaviour*, p. 332.

unless we realise what we are doing. The psycho-analysts appear to be much more interested in describing symptoms than in effecting cures; but when they do turn their attention to cures they appear to depend on consciousness much in the same way as ordinary medical men depend on fresh air. They appeal from the unconscious to the conscious, and regard it as almost axiomatic that as soon as a dangerous complex has been brought from the unconscious into the wholesome field of the conscious its evil effects disappear. Their method accordingly consists in a process of probing the unconscious in such a way as to bring its dangerous contents into the healing range of the conscious.

In this process the analyst has a hostile force to face in the censor that the Freudian metaphor supplies to the soul. This figure personifies the force that keeps the elements in their proper place and prevents them from escaping from the limbo of the unconscious. The analyst's business is to pacify this cerberus, in order to allow free passage into consciousness of elements that are proving deleterious and that cannot be rendered harmless till they are brought to consciousness. By winning the confidence of the subject and then encouraging him to speak quite freely on whatever matters come into his mind, following easily and without effort whatever line association takes of its own accord, the observer is able to elicit a certain number of apparently unimportant facts that he can utilise in reconstructing the past experience of the patient. Occasionally there is a sharp break in the association: the patient suddenly stops, or changes the

subject abruptly. These balks so far from interfering with the analyst's purpose are his aids. They indicate a resistance, and show that the censor has suddenly awaked to a sense of his duties and does his best to prevent further escapes in regard to the matter that happens to have aroused him. The analyst, however, has had his hint, and it is his business so to lull the censor that at some other time the bar may be lifted and the troublesome matter brought to light.

The dream is regarded as the analyst's friend, for during sleep the censor is assumed to be a little off his guard, and more inclined to let dangerous ideas pass, if only they have the decency to disguise themselves a little. That is why our dreams are so fantastic. Freud's view, as everybody knows, is that all our dreams are the expression of an unfulfilled wish. What we cannot get in real life we secure to ourselves in dreams. There is no doubt an element, a strong element, of truth in this view, but it does not exhaust all the possibilities of the case, and other investigators have supplementary views. It is generally admitted, however, that dreams do have a more or less direct connection with our waking experience, and therefore may give valuable information about our mental content to anyone who has the skill to analyse them. Accordingly, the interpretation of dreams has taken on a scientific aspect and become a regular part of the psycho-analyst's work, and cautious people are not so fond of telling their dreams at breakfast time as once they were.

Obviously with all the elaborate methods of the

psycho-analyst the teacher, as such, has nothing to do. Not only do they demand a technical training that no practising teacher can hope to attain, but they involve an expenditure of time in their application that puts them for ever beyond the reach of ordinary professional teachers. But certain incidental applications of psycho-analysis may be made by all teachers. Indeed it is not too much to say that most teachers have practised a sort of rudimentary psycho-analysis from time immemorial. A wise old schoolmaster of my acquaintance used to say that we are all psychologists more or less. His remark may well be extended to psycho-analysis. Every time that we set ourselves to find the motive for an unintelligible act of one of our pupils we are embarking on a rudimentary bit of psycho-analysis. But there is all the difference in the world between this easy and incidental investigation and the serious and detailed analysis of the new experts. Full analysis of this kind involves the relation of doctor and patient, and ought to carry with it the intelligent consent of the patient. Indeed it is fortunately the case that without this consent it is impossible to psycho-analyse in the formal way. Even when the method is applied to the detection of crime, the accused's consent is necessary before a beginning can be made. All the supposed criminal need do is to remain silent. No doubt when full physical control of the patient is obtained, physical tests may be applied that give material for inferences with regard to mental states. But these are of doubtful value, and are in any case beyond the pale of educational investigations.

What, then, is to be the teacher's attitude towards the psychology of the unconscious ? To begin with, he ought to know it. Whatever may be thought about the technical application of the new form of analysis, the teacher ought to be aware of what has been done in the way of developing the new doctrine of the unconscious. It is his business to know his pupils as thoroughly as possible, and he cannot afford to neglect a whole reservoir of the pupil's experience. The content of the unconscious is an essential part of the pupil's nature, and must be known in a general way if the pupil is to be intelligently handled. But a distinction must be drawn between two different aspects of the unconscious, the psychological and the biographical. The teacher is entitled to find out as much as he can about the unconscious of his pupils so long as his interest is in the paid-up capital of experience that is there to be found. The youngster's present nature is what it is because of what he has experienced, and anything that helps to make clear what the result of that experience has been is a legitimate subject for investigation by the teacher. On the other hand, he has no right to pry into the biography of the pupil. Whatever comes out naturally in social intercourse may be legitimately used by the teacher. But he must not go out of his way to probe so as to discover biographical details that are not presented to him spontaneously. It may be argued, no doubt, that the teacher's relation to his pupils is of a very exceptional kind, and warrants a closer inquisition than is permissible to others. He is *in loco parentis*, and exists professionally for no

other purpose than the good of the pupil, and therefore is entitled to make all sorts of investigation that would be illegitimate for others.

The argument is plausible, but will not carry conviction so long as we are dealing with ordinary wholesome children who are healthy both in body and in mind, and when we come to cases that are pathological we enter a field that does not belong to the ordinary professional teacher. It is difficult to see why anyone should psycho-analyse normal children under any circumstances; but psycho-analysts seem to think that, so long as they deal with only healthy children, psycho-analysis is legitimate for all. Thus, in an effort to be scrupulously careful of the children's interests Oskar Pfister writes:

"Direct analysis of *healthy* children lies entirely in the domain in which the educator alone has the responsibility. This is a reason for us to be particularly cautious. We have no right to try all manner of experiments on the children committed to our care. The only right we have is to help them to become good and capable men. My reason for uttering these well-worn truths in this place is that evil tongues have not hesitated to affirm that psycho-analysts analyse here, there and everywhere, without caring about the consequences." [1]

It is not clear whether *healthy* in this passage applies only to physical condition. If it includes mental as well as bodily health, there seems no reason why the children should be analysed at all. Psycho-analysis is surely not to be regarded as a

[1] *Psycho-analysis in the Service of Education*, p. 157.

matter of routine in the New Education, like sounding the lungs or taking the pulse at a school medical examination.

No doubt the intelligent teacher interested in his pupils will from day to day learn incidentally a great deal about his pupils' minds. As a matter of fact he will probably learn a great deal that his youngsters do not wish him to learn, for they are continually "giving themselves away" in the presence of a keen and sympathetic observer. The kind of mistakes they make in ordinary written and oral work often throws a flood of light on dark places, and the teacher is entitled to all the help he can get in this way. The study of Freud's *Psychopathology of Everyday Life* and Drever's *Psychology of Everyday Life* will be found useful to the teacher, by training him what to expect, and how to interpret the ordinary reactions of school intercourse. So long as the teacher allows the light of ordinary experience to play upon his pupils just as circumstances direct, he is in a perfectly safe position. The trouble begins when he sets about arranging circumstances so that certain revelations are likely to be made. For here we have a mild form of technical psycho-analysis, for which, however, the professors of the new type are in no way responsible, since the plan has been followed for centuries by generations of teachers who had no idea that they were using anything more formidable than intelligent common sense, with the addition maybe of a little cunning of doubtful moral standing.

The problem may become a little more definite if we put the question: Is a teacher who has made

some study of psycho-analysis in a better position for finding out what is going on in the minds of his pupils than was the able and perhaps cunning teacher of centuries ago? The appropriate answer appears to be an emphatic *yes*. Even without applying any of the technical methods such as free or directed association, or time reaction, the modern teacher who is acquainted with this subject is in a better position to study his pupils with advantage than was his forerunner of the pre-psycho-analytical times. He knows what sort of things to look for; he knows that the pupil may with perfect honesty give a wrong reason for an action. No doubt the old schoolmasters were fully alive to the fact that their pupils could give ingenious but false reasons for their actions, but what the older generation of schoolmasters did not realise is that the pupils may themselves believe in the false reasons they assign. School youngsters even in difficult positions requiring explanation are not always the brazen hypocrites they sometimes appear to be in the eyes of undiscriminating teacher-judges.

The ordinary teacher's relation to the new methods thus becomes a little clearer. He ought to study the psychology of the unconscious, and even make himself acquainted to some extent with the methods followed by the psycho-analysts, so that he may learn how to profit by his knowledge of the psychology he has learnt. Then he is ready to derive every legitimate advantage from whatever happens in the schoolroom and the playing-field. Probably a thorough study of his own experiences in relation to his unconscious is one of the best ways of enabling

the teacher to put himself in the place of his pupils, and to behave intelligently towards them in consequence. By diligent study of his own experience the teacher gets the necessary knowledge without having to submit his pupils to analysis which, however honest the teacher may be and however careful, has a tendency to become morbid, and to produce an unwholesome relation between teacher and pupil.

Having got thus far, many teachers find themselves faced with the awkward problem: Should the teacher have himself psycho-analysed in order that he may the better understand the whole process in the interest of his pupils? To the plain, unsophisticated teacher this question comes with a shock of pained surprise. He is apt to ask: Why in the world should I be psycho-analysed? I am perfectly normal, and analysis is meant for the abnormal. The thorough-going psycho-analyst is ready with his answer:

> "I take this opportunity to emphasize the fact that there is no such thing as a normal human being. Everyone is abnormal in one way or another. According to Freud, every child is a 'polymorphic pervert.' This tendency is never altogether obliterated." [1]

Our reply is, so much the worse for Freud if he carries his theory to this extreme length. Ordinary experience shows that there are great numbers of human beings who sufficiently conform to the general type to be justly called normal. But even if the teacher's normality is conceded, he is not yet

[1] W. Stekel, *Disguises of Love*, p. 45.

out of the wood, for the psycho-analyst who has set himself up as the exponent of its pedagogic aspects soberly sides with those who would ask for this sacrifice on the teacher's part.

"According to the opinion of all competent men, it is a great mistake to imagine that one can analyse thoroughly before one has been analysed oneself." [1]

There is here the obvious loophole that the plain teacher does not propose to analyse his pupils in the technical way, and therefore has no need of that thoroughness to which one's own analysis is a condition precedent. The teacher can practise the rough-and-ready analysis of which we have been speaking, without the least need of having turned himself into a "case" when there was nothing the matter with him. There is a sinister suggestion in Dr. Pfister's introduction of the technical term *pedanalysis*. It would seem to imply that we have here a new and normal way of dealing with our ordinary pupils. Of course if all our pupils are Freudian "polymorphic perverts," the sooner we establish a psycho-analytic clinic in every school the better, but we decline to accept this pessimistic view. Probably the only foundation for it is the undoubted fact that we all do differ from each other, we all have our peculiarities. But this goes no further than to admit that we all have individuality, and our newer educators are exceedingly careful to respect this individuality. So far from being a

[1] Oskar Pfister, *Psycho-analysis in the Service of Education*, p. 155.

handicap, it is regarded as an asset, and there is much more need of a crusade to protect the commonplace pupil than to protect the pupil of marked individuality. Pedanalysis of a plain, straightforward sort may well be recommended. Child Study in moderation is an excellent thing, and has always been carried on to some extent. But the natural-history stage of pedanalysis as exemplified in child study is something quite different from the application to children of a form of analysis that properly belongs to the resources of pathology, and should have no place among ordinary wholesome children.

Teachers and parents have a natural objection to the introduction of brass instruments into school for the purpose of psychological investigation. Some education authorities take up the attitude that they do not object to educational experiments in their schools, but lay down the condition that instruments must not be used. The distinction is perhaps natural: it certainly is not rational. It implies that the material part of the child must be carefully protected from external interference, while the spiritual part is left open to assault from all sides. Wise teachers are aware of certain dangers that may accompany the study of mental science in their own case, and they agree with the warnings that psychologists themselves give against the introduction of the psychological *attitude* into the school-room. When Münsterberg distinguished between the attitude the teacher should adopt towards his pupils and that the psychologist must take up towards the persons he studies, he did a service to all teachers, particularly to those whose consciences drive them

to make a careful study of child nature. If this be true about ordinary psychology, how much more is it necessary to be on our guard against the insidious attractions of psycho-analysis. Let us cordially admit that it has its place, and a very important one. Teachers are only too glad to be able to hand over to the professional analysts any pathological case that may occur in their practice.

The detection of pathological cases is not easy, and this difficulty is one of the chief reasons why teachers should know something of the principles of the new method. They ought to know the sort of symptoms to look for in doubtful cases. The intelligence tests give an indication of the possibility of actual defect, and up to that indication the teacher may be expected to work. But when a *prima facie* case has been made out for the probability of defect in any instance, the matter should then be handed over to the specialist. The teacher has done his part. So with the moral side in so far as the psycho-analytic treatment is concerned. The teacher finds himself richly repaid for his studies in the psychology of the unconscious when he gets over the natural tendency to impute wrong motives and impulses to his erring youngsters. Many offences that used to be put down to original sin, plus the various aggravations invented by the individual, are now traced to their causes, and the pupils treated accordingly. But when a particularly obdurate case occurs, which the teacher finds himself incapable of handling, he has now the chance of reporting the case to his educational authority, or to the parents when these latter are in a position to deal

with such a serious case. No doubt in the near future all education authorities will have a psychological expert in their service to deal with these matters along with others.

While the teacher will welcome the opportunity of handing over the serious responsibility of dealing with mental cases that are clearly pathological, he will maintain his self-respect by knowing how to find out which cases need the attention of the experts. At the present moment there is a certain resentment among some teachers on the point of determining which children are mentally defective. The decision here has been generally left entirely in the hands of the medical officers. This is not unnatural, since these men are generally well trained along scientific lines. But they are often ludicrously ignorant of school conditions. In determining whether a child is defective or merely backward there is no reason to suppose on first principles that the doctor is more likely to be right than the teacher. The chances are, in fact, in favour of the teacher being the better qualified to judge. The medical man certainly knows the bodily side extremely well, but he is apt to judge from that side alone, and if he ventures on some mental tests he is quite as much out of his beat as is the teacher who ventures a physical diagnosis. No doubt if teacher and doctor have both studied intelligence tests the doctor is on the whole more likely to get at the root of the matter, because of his previous scientific training on the biological side.

Here, as in the matter of psycho-analysis, the teacher's self-respect demands that he should know

enough about the matter to behave intelligently, to report with knowledge. In the case of intelligence tests he ought to be able to go all the way and to consult with the doctor on equal terms. With regard to analysis the matter is different, and the teacher should be glad to hand over the matter entirely into the hands of the specialist. After all, he is himself a specialist in intelligence, but only an outsider in the matter of psycho-analysis.

In fact, as my friend Dr. R. R. Rusk, of St. Andrews, is very anxious to impress on the audiences to whom he lectures, teachers do extremely well if they can apply their knowledge of the psychology of the unconscious to their work in such a way as to avoid the formation of complexes. So far from resolving complexes already formed, the ordinary teacher is very apt to form fresh complexes during the pupil's school course. The unnecessary restraints of school life, the anxieties resulting from over-stimulated emulation, the strain of examinations, the humiliations that accompany the teacher's thoughtless sarcasms—all these have a tendency to produce unwholesome repressions with consequent complex-formation. In the poorer districts of towns the children in elementary schools have often additional sources of danger from their bad home conditions. It is obviously greatly to the interest of the pupils that the teachers should have a clear idea of the possibilities of the harm that may be done by sheer ignorance and misinterpretation. On the other hand, the teachers must be for ever on their guard against reading too much into the

ordinary reactions of their pupils. A study of the unconscious is very apt to leave traces in the way of oversensibility to reactions that may possibly have a meaning for psycho-analysis and just as possibly not. The teacher must be as nearly normal as Stekel and Freud will allow him, and must above everything carry on his work in school by dealing with his pupils on a wholesome human footing.

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CHAPTER XII

FREE DISCIPLINE

IN all that has been said about the various new methods of dealing with school matters, we have taken it for granted that there exists an authority on the part of the teacher that enables him to apply whatever plans strike him as most likely to produce the effects he desires. The source of this authority is often misunderstood. On very many occasions I have put this question in examination papers for young teachers: "State, in as plain and untechnical terms as you can, why it is that pupils obey their teachers." Long experience has taught me that there are three popular answers that among them account for over 90 per cent. of the papers. The first, and by far the most popular, is that pupils obey because of physical force: because if they do not, a worse thing may befall them. The next most popular answer is given more frequently by young women than by young men: pupils obey their teachers because they are fond of them. The third is nearly as big as the second group, and is made up of those who think pupils obey out of respect for the superior knowledge of the teachers. Very little reflection is needed to discover that the first and most popular reason is false, as it is expressed by the students. No master by sheer

physical force could overcome a class of forty boys. They could get the better of him by merely throwing themselves upon him: sheer weight avoirdupois would do the rest. Corporal punishment is often confounded with control by mere physical force. But corporal punishment can be inflicted only with the consent of the culprit. Unless he consents, it is not a case of punishment: it is a fight. While the master could probably in physical combat account for any one boy in his class, he could not do the same for his class collectively. Brute force may in the last resort stand behind the teacher as the representative of society, but this brute force is not the direct cause of the obedience he commands from his pupils.

Personal liking no doubt has an important effect, but the smallest experience of school work will supply abundant examples of pupils who are willing to obey teachers that they do not like, and ready to disobey teachers whom they do like. So with the respect for the teacher's learning. The pupils may be as full of awe for their master's knowledge as were the rustics of Sweet Auburn, but it does not follow that they obey him because of that. There are other kinds of knowledge for which they have a much higher respect than for that at the teacher's disposal. How to manipulate a motor, drive a flying machine, or even work successfully a Punch and Judy Show, are skills that win various ages of juveniles much more effectively than the sort of knowledge the schoolmaster deals in.

The real source of the teacher's authority lies elsewhere, and may be found in two main directions.

First there is the nature of society. Modern social life is built up on a system that includes obeying teachers as a part of the nature of things. Everything is conducted on that principle. All the paraphernalia of educational administration tends to buttress the authority of the teacher. The fact that there is a special Government department presided over by a Cabinet Minister, the existence of a huge staff of highly important officials at the Education Office and distributed peripatetically throughout the country, of local authorities specially set apart for educational administration, of numerous more or less dignified educational buildings, all produce the impression that the army of teachers is a serious matter and the members of that army are persons to be obeyed. The little boy who has been threatened by nurse or parent for a long time with the sudden end of disobedience that is to occur when he is sent to school, appears at the portals, when the fatal day arrives, with full purpose of and endeavour after independence. He'll show them, he says in his ignorant pride. Within the classroom he finds himself, to his own surprise, doing what he is told. He explains afterwards that somehow or other everybody seemed to expect him to obey, and as all the rest were obeying he fell in with the movement, and thus supplied a typical case of the power of the social nature of things.

There is, however, still another source of power. The authority of all teachers is not the same. The position of prestige into which society thrusts a teacher gives him every chance of securing the obedience of his pupils. But all do not secure it

to the same degree. A good deal depends in the last resort on the teacher's personality. We have all a certain control that is innate. It may be used wisely or ill, but it does not seem capable of being increased in itself by anything we or others can do. There are few people who are entirely without this power, but those who lack it are quite incapable of securing obedience, even when society does its best in the way of supplying a position of advantage. Training colleges can help those who have a poor power of control to make the best use of the power they possess, but they cannot supply this power to one who is born into the world without it. They cannot supply a backbone to an invertebrate.

This power of control is often spoken of as the power of maintaining discipline, and under this name has acquired an altogether disproportionate importance in the eyes especially of the teachers of elementary schools. It is important, no doubt, so important that it is a *sine qua non* of success in teaching. We cannot even begin teaching unless we possess it in some degree. But the mistake lies in giving it a positive value when it is entitled to only a negative one. Mr. A. C. Benson shows less than his usual acumen when he writes: "The power of maintaining discipline is the *unum necessarium* for a teacher. If he has not got it and cannot acquire it, he had better sweep a crossing." [1] It is necessary, without doubt, but it is far from being the only thing that is necessary. It may be possessed in the highest degree by those who are utterly incapable of teaching. On one occasion the

[1] *The Schoolmaster*, p. 23.

headmaster of an elementary school had to be present at court in a case of truancy. His second master and a class-teacher happened to be ill that morning, so it came about that 120 boys were left in a room with no teacher. The school porter, an old sergeant, became aware that something was amiss, dashed upstairs, sprang upon the little platform, and *glared*. There was dead silence: but nothing else happened. The glaring continued for eighty minutes, till the headmaster returned, but that was all that went on. Mr. S. P. B. Mais writes in *A Public School in War Time*:

> " Countless men have I known who are rapidly making names for themselves as successful schoolmasters, who under any sane system of education would have been sacked after their first day; men who have this wonderful gift of being able to keep boys in order, but beyond it nothing, nothing at all—they would fail even as policemen. They have no powers of direction; they can only hold their hands up and keep the traffic at bay. Successful schoolmasters, indeed! "

A man who can maintain control is in a position to begin teaching. He has cleared the decks. But teaching itself is a positive process, and the power of control in itself has nothing to do with it, beyond making it possible. In ordinary school phraseology " a good disciplinarian means a person who can easily control a class, and the discipline of a school is usually understood to mean the control the staff exercise over the behaviour of the pupils." In the old days of payment by results, there was a special grant of one shilling per head for good discipline and organisation, or eighteen pence for excellent.

In practice the difference between the two was determined entirely by the discipline: the organisation was a mere make-weight.

It is now generally agreed that in these bad old days this power of control was greatly overvalued, since it was very often used to produce a totally unwholesome kind of discipline, of the worst Prussian brand, and a group of advanced educational people have now come forward with a doctrine of what they call "free discipline." To the question I set my young teachers they would reply that the matter was not of the first importance. The question that really matters, they would say, is "Why should pupils obey their teachers at all?" Should they not be allowed to do things in their own way, without the continual interference of the teacher? In the Froebelian phrase, the teacher's function should be that of benevolent superintendence: he must not interfere, but ought to let the young people develop according to the laws of their own nature. His position is to be "a passivity, a following." In what has gone before we have become gradually educated up to something approaching this bold claim, but the ordinary practical teacher, who is a good disciplinarian, can hardly speak peaceably about this demand for freedom for the child within the school. The case for Free Discipline is perhaps best put by Mr. Norman MacMunn in his *The Child's Path to Freedom.* He begins his attack by quoting from a Presidential address delivered to the Teachers' Guild by Dr. Temple, ex-Headmaster of Repton:

"'The only true liberty is through discipline,' he begins,

with a queer inversion of the conclusions of the most recent psychologists. To this strange dictum—and the context shows what Dr. Temple means by discipline—we might well oppose Dr. Dewey's view that:

" ' The school has been so set apart, so isolated from the ordinary conditions and motives of life, that the place where children are sent for discipline is the one place in the world where it is most difficult to get experience—the mother of all discipline worth the name.'

" Dr. Temple goes on:

" ' A new-born child has practically no will. The elementary stages of education consist in creating will, the faculty of attention, which is the essence of will.'

" Now to say that a new-born child ' has practically no will ' is just as true as, and no more true than, to say that it has no intellectual or artistic powers, or that it has a negligible capacity to digest varied nourishment." [1]

Understanding discipline in the sense popularly recognised in teaching, Mr. MacMunn distinguishes three stages of its application. The first is that of stern repression, practically based on force, whether supported by consent or not: the long, dull, dreary, brutal period during which the cane was the first and last resort of the schoolmasters whom Southey stigmatises as the " phlebotomists." Next came the second or transition period, during which educators became civilised, but still could not bring themselves to the pitch of allowing perfect freedom to their pupils. Their influence, however, was exercised in the milder form of a dominant personality. This group is represented by men like Arnold and Thring, against whose characters it is hard to make a case. Mr. MacMunn, however, is inexorable: he would sweep even such noble

[1] *Op. cit.*, p. 52.

exemplars from the path of freedom for the children. These masters were good enough in their way, and they certainly did admirable work in bridging the gulf between the old harsh, repressive system and the new freedom that is just beginning. But what is wanted by the newest school of discipline is freedom from all repression, even the repression that comes from an overmastering personality. The freedom of the pupil is to be positive, not merely negative. " Negative discipline is powerless," quotes Mr. MacMunn from Goethe, and goes on to establish the claims of that form of discipline which children set up among themselves when they receive full opportunity and encouragement. Most progressive teachers will be with him in his preference for positive or constructive discipline as compared with the negative and repressive form. He is opposed to " don't " as the basis, and makes a very effective quotation from Sir Robert Baden-Powell :

" Authorities have come along to improve the Scout Law and, not recognising the active side of it, have changed it to the reverse—a series of ' don'ts.' ' Don't ' of course is the distinguishing feature and motto of the old-fashioned system of repression, and is a red-rag to a boy. The main step to success is to develop, not to repress, the child's character, and at the same time, above all, not to nurse him. He wants to be doing things : therefore, encourage him to do them in his own way. Let him make his own mistakes ; it is by these that he learns experience." [1]

To this I have heard a very capable old disciplinarian make the contemptuous reply that he for

[1] *The Child's Path to Freedom*, p. 73.

one had no objection to the little word "don't," adding complacently: "The style of the ten commandments is good enough for me." But like the good Christian he is, he got into difficulties when I pointed out that the line of evolution was obviously from the "Thou shalt not" of the Old Testament to the "Thou shalt" of the New. When Christ was asked by a hostile lawyer "Which is the great commandment in the law?" the reply included none of the prohibitions, but summed up the spirit of the law in the positive injunction:

> "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment. And the second is like unto it, Thou shalt love thy neighbour as thyself. On these two commandments hang all the law and the prophets."

My veteran friend argued a little shakenly that we were not yet sufficiently advanced for this doctrine, at any rate our schoolboys were not. It is something to have it recognised that we are at all events moving in the line that evolution appears to be taking, even if we have hard work yet before us to convince people that we are ready for the immediate application of the new freedom.

When it comes to the dominating influence of the personality of the teacher it is hard to agree with Mr. MacMunn, though it is easy to understand the position that he so clearly outlines. He wants the children to be perfectly free to act in their own way and to develop along their own lines without any external interference, even if that outside influence be in itself excellent. He looks back with horror

at the long record of brutal and unintelligent repression in the past, and looks forward to the glorious freedom that is just dawning or about to dawn, and between the two he makes out a dim period of transition occupied by a group of men, whom he calls *impressionists*, who still seek to dominate, though they no longer fall back upon savage repression, but are content to get their way by imposing their personality on their pupils. He is unhappy about Arnold and Thring. He likes them[1] and admires them, but he does not like their getting into the way between their pupils and complete freedom. It is universally admitted that Arnold left his mark on his pupils, and it is not a sufficient compensation, in Mr. MacMunn's opinion, that the mark was a good one. He wants Arnold's boys to be themselves, not a replica of their great master. But he is not happy in his objections. Thring worries him nearly as much. It is only after he has done honour to both, that he feels at liberty to get in his blow.

"All I would point out is, that there are thousands of men and women having the gifts neither of Arnolds nor of Thrings who aim at the more or less complete appropriation of the souls of those whom they teach—on the ground that Arnold and Thring have set them the example."[2]

But he has to admit that this indirect control is of a totally different kind from that exercised by the pedagogues that rouse his warmest indignation. There is a saying of Washington's that is popular

[1] Cf. J. E. Adamson, *The Individual and the Environment*, p. 342.

[2] *The Child's Path to Freedom*, p. 59.

in America and is apposite here. Henry Lee had written to Washington recommending that the influence of Congress should be brought to bear with a view to end a small rebellion, and Washington replied "Influence is not government." Dr. E. Ellsworth Brown uses the remark as the text on which to preach an educational sermon[1] recommending the very sort of thing that Mr. MacMunn resents. The implication is that education should attain its ends by more or less indirect means, whereas *government* would suggest just the sort of direct imposition of authority that marked the age before the impressionists. In point of fact we ought to welcome impressionism and do all we can to get men into the profession who are worthy of the title.

Let it be granted that Phlebotomism is now entirely out of court, and that Impressionism is still on its trial. There remains the third and much-disputed position that demands for the pupils the most complete freedom conceivable, and that accordingly adopts the name of Emancipationism. If this third stage develops in the way its advocates would desire, it would almost appear as if indeed "this our craft is in danger to be set at nought," for there does not seem to be any very important place left for us. Mr. MacMunn as an enthusiastic emancipationist has reached the conclusion that the time has come for Impressionism to be swallowed up in Free Discipline. He is of those who would suggest as the most appropriate motto for all teachers one or other of the two French verbs *s'effacer* and *se blottir*. But the question naturally rises: can the

[1] *Education by Influence*, p. 3.

teacher at will efface himself or blot himself out? Whether he will or no he is thrust into a position of prominence, and must act accordingly. Even on the physical side it is by no means easy *se blottir*. The Montessorians attack the Kindergartners on the ground that the latter are always prominent in the class-room, while the Montessorian directresses keep modestly in the background. Defending her system, a well-known London Kindergartner admitted that the mistress in a Kindergarten necessarily occupied a position of prominence, because of her *size*. She was too polite to make any reference to the dimensions of directresses. But the implication was that literally, and from the ordinary teacher's point of view also figuratively, the teacher cannot efface himself. His personality will out, and will influence the pupils. He may not seek to get his pupils to imitate him: may indeed live in dread of their imitation. But for weal or for woe, there he is, set upon a pedestal. Many a teacher would willingly preach in all seriousness to his pupils from the whimsical text "Don't do as I do, do as I tell you." But the sermon is in vain: the teacher is there as a model for imitation. There is one comfort for the emancipationists that they do not seem sufficiently to appreciate. Imitation is affected by suggestion and may therefore work both positively and negatively. The contrariant disposition, of which Dr. Keatinge makes so much, may operate in such a way as to save the pupils from the fatal subservience of which the emancipationists are so much afraid.

Speaking from the experience of his own upbring-

ing, John Stuart Mill made a remark that must be pleasing in the ears of the emancipationists who happen to come across it: "Strong-willed parents have weak-willed children." Elsewhere, I have already quoted a passage that cannot be too often brought to the notice of teachers: it is from a public eulogy on a distinguished teacher:

"His students had such implicit confidence in his knowledge, and such reverence for his opinion, that after leaving him they no longer cared to think for themselves. They were satisfied by the conclusions reached by a mind so much superior to their own, possessing a grasp and insight which they realised was so far in advance of anything they could ever hope to attain." [1]

What, then, are strong-willed parents to do, and how is a brilliant teacher to avoid being lampooned in this way after his death? Obviously strong-willed parents ought to have wills strong enough to prevent them from refusing to their children the chance of exercising their wills in their turn. As to the brilliant scholar and thinker, it is surely possible for him to talk a little less and allow his pupils to talk a little more, and thus acquire the necessary self-confidence. But surely he need not be called upon to surrender his personality. In point of fact it cannot be done, and the emancipationists ought to know it. Does the chief adviser of the children of Tiptree Hall seriously ask us to believe that his personality does not affect his pupils? Can anyone picture Mr. Caldwell Cook as a colourless imper-

[1] S. B. Sinclair, *The Possibility of a Science of Education*, p. 18.

sonality in a room full of vigorous Littlemen? No doubt Mr. MacMunn, Mr. Caldwell Cook, and Mr. A. S. Neill have learnt the art of holding their tongues at the proper place, and leaving their youngsters the necessary opportunities to make their own mistakes, but the three are as virulent impressionists, every one of them, as Arnold and Thring themselves.

At this stage the honest and modest teacher is apt to feel awkward. He cannot help judging that he is right in not attempting to suppress his personality, yet at the same time he cannot get away from the humiliating impression that he is thrusting himself forward into the limelight. He agrees with Professor Palmer that the ideal teacher must have a readiness to be forgotten, must have an aptitude for vicariousness, must be willing to give service without hope of praise or recognition:

> "A teacher does not live for himself, but for his pupil and for the truth which he imparts. His aim is to be a colourless medium through which that truth may shine on opening minds. How can he be this if he is continually interposing himself and saying, 'Instead of looking at the truth, my children, look at me, and see how skilfully I do my work. I thought I taught you admirably to-day. I hope you thought so too'?"[1]

It goes against the grain to find fault with this kindly criticism. With the moral side we may cordially agree, but that "colourless medium" cannot be passed unchallenged. We may empty ourselves of all pride, malice, and uncharitableness;

[1] G. H. Palmer, *The Ideal Teacher*, p. 26.

we may even subdue some of our good qualities to such a pitch as to render them innocuous to our pupils, but we simply cannot get rid of *all* our qualities, and appear fair to the front view, though like the Ellewomen of Norse mythology we have no backs and have our insides scooped out. We must be fair in our presentation of the truth, but it is beyond our power to prevent our personality from tinging whatever passes from our minds to the minds of our pupils. There is indeed a certain danger that in presenting controversial matter we may distort the truth seriously by our very determination to suppress our own bias. This danger has always been recognised, but now its seriousness is increased by what we have learnt about the unconscious. Our conscious bias may be in one direction, our unconscious in another. The only way out of the maze is by doing our best to keep ourselves as unbiased as is possible in our consciousness, and leave it at that. All this, however, concerns the subject-matter of our teaching, and is a little off the track of the problem of control.

It is accordingly when we get to what is technically called "free discipline" that the real trouble begins. Even at the command of the emancipationists, we cannot give up our "influence" in school. The thing is impossible, even if our wills consented. What, then, about *government?* Can we hand it over bodily to the pupils? At the proposal to give the pupils as a body the complete control of school and class, the startled experienced teacher of to-day can think of nothing better to say than "Bolshevism." Even when the emancipa-

tionist goes on to explain that the master would still be there as an interested spectator, though in the background and merely, in the official phrase, "in an advisory capacity," the disconcerted teacher does not quite recover his balance. He is not sure whether it is possible that such things can be seriously proposed by people who are apparently not under restraint. The law of gravitation in the school is that the master is the effective controller, and nothing short of the full recognition of that law will satisfy the plain, practical, successful schoolmaster. He shudders when he hears an authentic tale of a teacher beginning his dealings with a class by proclaiming that whatever any one of the pupils does, there will be no punishment, and that each one can do what seems good in his own eyes, without fear of disagreeable consequences from the school authorities. He is incredulous when sober and apparently sane men tell him of the wonderful success that has followed on such anarchic methods. There is one story in particular that has a specially fascinating effect on the practical schoolmaster when it is quoted, as it invariably is in all discussions on free discipline. A certain bad boy when faced with this charter of liberty of action without penal consequences showed his independence by smashing a vase that somehow happened to be handy. But when the master offered his watch as the second sacrifice (I wanted to say *gold* watch, but I must keep to the text of the story) "the boy turned white, trembled from head to foot, and said he *could* not." Several practical teachers to whom I have mentioned this recorded incident have

reacted in a precisely uniform way. Each looked startled, pulled out his watch, gazed at it anxiously, and replaced it in silent scepticism. It is not necessary to call in question the truth of this story that sets teachers' teeth on edge. There is no doubt that Mr. Homer Lane, Mr. Thomas Mott Osborne, and Mr. Norman MacMunn have done all that is claimed for them. The trouble is that the supply of such men is rather limited. This is the fatal objection to a great many educational reforms. They often work exceedingly well in the hands of those who have originated them, and the very few others who can bend the same bow may attain something like the same success; but the great mass of school work in the country must be carried on by people who have no extraordinary talent, ss any scheme suggested for general application must be such as can be used by plain, everyday personalities, inspired no doubt and aided by the example of the sprinkling of supernormal teachers that the profession will always possess.

Within what limits, then, is this free discipline a workable plan? On the side of mere teaching and study we have found that it is both desirable and possible to delegate a great deal of responsibility to the pupil. The problem remains how much of this delegation is desirable and possible in matters of control. The natural off-hand answer is that a class may be allowed to conduct its own affairs so long as it behaves itself, and does reasonable things. The teacher is there to see that it does not get off the rails, and do foolish things. At this point the emancipationists vigorously object. They say that

this is a mere travesty of freedom, and amounts to no more than an invitation to the class to do what the teacher wants, without the teacher having the trouble to tell them what that is. The moment pupils venture on an original movement they are pulled up. It is a mere dancing in chains. The emancipationists maintain that the real value of free discipline is that the pupils have a chance to go wrong in their own way, to make their own mistakes, and to find the way to remedy them on their own account.

But unless we are to fall back upon the intolerable conditions of Tolstoi's anarchic school at Yasnaya Polyana there must be some ultimate source of authority, and no one is more likely to exercise that authority wisely than the man or woman who has devoted years of preparation and experience to the acquiring of skill in using just such a control. Let the teacher give the pupils as much rope as he can without disaster to the class as a whole, but he must retain in the last resort the power of intervention and veto. Further, it has to be noted that not all teachers have the same span of delegated authority. The amount of freedom accorded to the class in the way of discipline has a definite relation to the qualities of the teacher concerned. Some have much greater power of delegation than others. No doubt under ideal conditions we could secure enough men and women with the widest span, and the emancipationists might then carry their theory to its full limit. But as things are we must deal with the staffs actually available. There is no sense in asking the man with a *c* power of control

to give the amount of freedom that it is quite safe for one with an *a* power to give.

Besides, the children are not being prepared for a world in which they will be allowed to live out their lives without restrictions. They will not only experience in their future the general restraint that comes from living in a society at all, but in almost every case they will have to take account of the authority of some person or persons placed over them in a position of definite superiority. It is well, then, for them to begin by learning to recognise the authority of a man or woman whose business it is to see that the school organisation is so arranged as to lead to the best and freest development of the pupil's character and personality. It is regrettable that we teachers fall so far short of what we should be in order to discharge with perfect success the heavy responsibility laid upon us, but matters will certainly not be improved by making us work under conditions of discipline that take from us the chance of bringing out the best that is in us.

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